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ORIGINAL ARTICLES.

PHILOSOPHY AND HOMŒOPATHY.

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IN a volume of essays[1] submitted by the Editor of THE MEDICAL NEWS to the writer for review, the professor of materia medica and therapeutics in the Homœopathic Medical College of the University of Michigan has endeavored, among other things, logically to establish upon *à priori* grounds the validity of the so-called "homœopathic law of cure." The author seems to be a thoughtful writer, and his essays have the merit of perspicuity, so far as the essentially imperspicuous nature of his case allows. He is evidently firmly convinced that truth is with him. He frankly confesses wherein the practice of the so-called homœopathist of to-day departs from the principles laid down by Hahnemann. His tone is temperate and his style is scholarly.

For these reasons a more extended examination of a few of the arguments and illustrations brought forward in this series of papers than would fall within the limits of the ordinary book-notice, will not be unprofitable.

The subject of what is and what is not homœopathy might perhaps be left to the followers of Hahnemann, true and false, as a matter of no concern to those whose time and thought are devoted to the investigation of the problems of the causes and processes of disease, and the discovery of means wherewith to promote or restore health. Unfortunately, however, opponents of legislation which shall debar the unscrupulous and incompetent from disgracing the ranks of the medical profession, have brought the status of homœopathy prominently forward as a disturbing element.[2]

In discussions thus provoked, so many reckless assertions have been made by apologists for homœopathy, both in its own ranks and in the ranks of the profession of medicine, that a candid and straightforward statement, such as is made by Professor Mack, becomes of inestimable value in clearing the ground of discussion from a tangled overgrowth of false issues. In an essay read before the Philadelphia County Medical Society the writer of this review offered certain propositions concerning the nature and scope of homœopathy, which have been vigorously denied by homœopathic critics; one of whom went so far as to bring a charge of misquotation, but without making any attempt to substantiate that charge. In the logical papers of Prof. Mack, we find exactly the same views of homœopathy as those set forth in the paper referred to.[1]

The writer's propositions were as follows:

1. Homœopathy is exclusively a system of drug-therapeutics.

2. It is an exclusive system, arbitrarily devised, inflexible and claiming infallibility.

3. It expressly prohibits the endeavor to interpret morbid symptoms as indications of changes in the structure or functional activity of definite tissues and organs . . . and fixes attention upon the symptoms alone, independently of their origin, as constituting the whole of the disease and affording the sole indication for treatment.

4. The doctrine of homœopathia is inextricably bound up with the practice of infinitesimal dosage.

Concerning the subject-matter of the fourth proposition, Prof. Mack has nothing to say; indeed, he expressly avoids the question; so that it may be left out of consideration in the present paper.

Let us see, however, what he has to say concerning our first proposition, that *homœopathy is exclusively a system of drug-therapeutics.* In an essay

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[1] Philosophy of Homœopathy. Charles S. Mack, M.D. 8vo., pp. 174. Chicago: Gross & Dellbridge, 1890.

[2] The writer, in common with those physicians of Pennsylvania who have supported the proposed bill to create the "Board of Medical Examiners and Licensers," would heartily favor any honorable means whereby the best men in the homœopathic ranks could be united with the best men in the ranks of the so-called "regular" physicians in furtherance of this wholesome legislation. Our aim is to protect the community from charlatans and pretenders, "regular" or "irregular," and not to war against theories or methods of practice. These latter are proper subjects for discussion, but not for legislation. State examinations could be held in the fundamental sciences, and not upon the arts of medicine; upon anatomy (normal and morbid), physiology, chemistry, toxicology and certain admitted principles of hygiene, surgery, and obstetrics, but not upon therapeutics or the practice of medicine. Thus the entire question of "schools" or "sects" could be avoided without injustice on the one hand or compromise of principle upon the other.

[1] Proceedings of the Philadelphia County Medical Society, vol. ix. p. 278 et seq.; THE MEDICAL NEWS, Oct. 19, 1889, p. 427 et seq.

entitled "Homœopathy: the Only System of Curative Medicine," the author draws a distinction between *cure* of patients and their *recovery*, and a parallel distinction between *homœopathic treatment* and *useful non-homœopathic treatment*. He distinctly states that measures of prophylaxis and of palliation, hygienic measures and the administration of antidotes, of parasiticides, etc., are *not homœopathic*, though they may lead to the recovery of the patient.

A patient who has recovered after the cause of his disease has been removed, is not, however, cured. Cure of a patient, according to our author, is something entirely apart from the use or effect of remedial measures having reference either to the cause of the disease or to the pathological processes, structural or functional, resulting from the operation of that cause. "By *cure*," he says, "we mean such modification of the quality of vital processes and their effects that whereas these processes and effects were abnormal they shall become normal, and this as the *direct* result (not an indirect) of the medicine used. A drug can be curative only by reason of its dynamic effects upon the patient. Curative treatment is invariably a treatment of the *patient*, and never a direct attack upon the cause of disease." Again, he says: "We have recognized the propriety of avoiding proximate causes of disease; to avoid them is hygienic. We have also recognized the propriety of directly attacking, and destroying, and removing such causes when they exist upon or in the body, by any means not harmful to the patient; this is prophylactic. These hygienic and prophylactic measures are *aside from the subject of homœopathy*, and, as we have seen, are not curative." And again: "The two sets of facts between which a law of cure must define the relation are, on the one hand, unmodified disease-effects, subjective or objective; and, on the other hand, unmodified dynamic drug-effects, subjective or objective." And again: "We may say, moreover, that curative treatment is invariably the treatment of a patient with a drug (or drugs) indicated by the symptoms which he exhibits."

These citations clearly exhibit many things, to some of which we may return hereafter. For the present it will be sufficient to note the claim that homœopathic treatment and curative treatment are identical; and the explicit statements (*a*) that treatment directed against the causes of disease is not curative, and therefore *not homœopathic*, and (*b*) that the *only curative* or homœopathic treatment is the giving of "*a drug or drugs* indicated by the *symptoms* of the patient." This claim and these statements entirely bear out our first proposition, and partially bear out our second and third propositions.

In another essay entitled, "Is Homœopathy Exclusive?"—which may be considered in connection with our second proposition (*i. e.*, that homœopathy *is* exclusive)—the author affirms his willingness to help his patient to recover by "useful, non-curative treatment," but again distinctly asserts that such treatment is not homœopathic. "The explanation of any apparent inconsistency here," he says, "would be arrived at by accurately defining the word *cure*. Having thus defined *cure* we should, I think, be in a position to maintain that no treatment not homœopathic can be curative—*that, as a system of curative medicine, homœopathy is exclusive;* but it does not follow that there may not be indefinitely many principles (concerning which *similia* says nothing) upon which useful, though not curative treatment, can be based." Again, he says: "We have now, by exclusion, demonstrated that *no possible law of cure can exist* excepting that which defines *similarity between unmodified disease-effects and unmodified dynamic drug-effects* as the criterion by which we can know that a drug is curative. We are thus obliged either to fix our belief in *similia* as the law, and *the only possible law of cure*, or, as regards curative medicine, to take up with that most dismal belief which has come to be known as medical nihilism."

Surely no stronger statement of the claims of homœopathy as an exclusive system could be made. And, again, it will be noticed that drug-giving is not only tacitly assumed, but is expressly stated as the one method of homœopathic treatment—the only method of cure.

Let us now consider some of Prof. Mack's statements in relation with our third proposition, concerning the ends sought to be achieved by drug-giving in accordance with the homœopathic principle. We have already seen that homœopathic treatment, as such, does not aim at the removal of the causes of disease. This, our author states, is prophylaxis and not cure; while homœopathy has only to do with cure. It does not aim to combat the effects of pathological processes, or to antidote poisons, or to remove from the blood toxic products, the result of disease. These measures, says Prof. Mack, as plainly as language can say anything, may be useful; they permit the patient to recover; but to permit a patient to recover, or to be useful, is not the object of homœopathy.

Thus, the administration of stimulants to carry a patient over some critical period is useful but not curative, and therefore it is not homœopathic (p. 37). And here is an illustration which we cannot do better than to quote exactly in the words of the candid writer. In speaking of the use of atropine to avert the danger of adhesion between the iris and the lens in cases of inflammation of either of these structures, he says: "This certainly is not homœopathic, equally certainly it is

not curative; to modify in any way the inflammatory process is not the direct object of such treatment; the object of such treatment is simply prophylactic." Again, he says: "Never admit into either of those two distinct sets of phenomena (disease-effects and drug-effects) between which you institute a comparison in your search for a curative medicine—never admit into either of these sets of phenomena an hypothesis as to how a particular effect has been produced." The full significance of this extraordinary teaching must be reserved for discussion further on. For the present it is enough to note that it bears out the proposition that homœopathy forbids the attempt to produce by our remedial measures definite effects upon definite structures or functions. This is still more evident when we read again: "If B is cured of syphilis by the use of mercury it is not because A was cured of syphilis by the use of that drug. Each is cured because mercury is capable of producing effects similar to those produced by syphilis in him." Given a patient, then, with syphilis and without symptoms similar to those occasioned by the use of mercury, he could not be homœopathically treated with mercury; or given a patient with syphilis, and without symptoms similar to those produced by the use of potassium iodide, he could not be homœopathically treated with the latter drug; because homœopathic treatment is not directed against the cause of the disease, or against pathological processes or their effects, but is solely based upon symptoms manifested in the individual patient, without reference either to the cause of the symptoms or to the pathological conditions which they denote.

Such being Professor Mack's exposition of homœopathy, we wonderingly ask how a thoughtful man can put his faith in such a system, and even come before the world as its champion on the ground of its philosophic truth. The answer must be found in that tendency to mysticism which is often associated with the highest qualities of intellect. From some allusions in the medical essays, and from other essays found in the same volume, we judge that the author is a member of a certain sect of mystics. It would be grossly improper, of course, to discuss or debate his faith—and we ignore altogether in our critique of his position some remarkable theories of analogy between disease and sin, homœopathy and confession, and so forth—but we may evidence these matters as an illustration of the psychological tendencies leading to what we consider his fundamental error in the conception of life and its processes. He assumes that vital activities and their perversions are not to be considered in relation with the general laws of energy; but that a mysterious something to which he gives no definite name, but which, for all intents and purposes, is the same as the "vital principle" of the ancients, is the governing power in such processes. Thus, disease becomes to him, as to Hahnemann, a derangement of this immaterial vital principle, and not a disturbance of function or alteration of structure in the material body. Thus, to him, as to Hahnemann, the causes of disease are essentially unknowable, and treatment directed against those causes unphilosophic. This position naturally leads our author, as it led Hahnemann, into some direct contradictions, as will be seen from the remarks upon "useful treatment" and "proximate causes," which we have quoted; but he evades the full force of this contradiction by his candid admission that "useful prophylactic treatment"—under which head he includes all measures directed against morbific agents or agencies—is not homœopathic.

The ethical question here involved, to our mind of highest importance, the author entirely overlooks. Patients consult a physician in order to be restored to health as quickly and as completely as possible. As a rule, they have no knowledge of medical history or of medical doctrines; and rarely are they acquainted with even the elements of the sciences upon which medical practice is based. They go to this man or that woman because of reputation, or because of supposed adherence to a certain "school;" but they draw no distinction between "cure" and "recovery," between "useful" and "curative" treatment. When one recovers, he says he has been cured; and he attributes the alleged cure to homœopathy, if the practitioner in attendance is professedly a homœopathist. Yet that practitioner, as shown by Professor Mack, may not have treated the patient homœopathically in any particular. To undeceive the patient, saying "You have not been cured, but have recovered; and your recovery is not the result of homœopathic treatment, but of useful treatment," would be eminently honest—but it is an unheard-of event. On the other hand, is it not dishonest to allow the patient to imagine himself "cured" by homœopathy, when in reality he has recovered under useful, *i. e.*, sensible, treatment? Professor Mack has himself laid the foundation for this question. It must be answered, and it can have but one answer.

This, however, is a digression. There is still another most unphilosophical doctrine affirmed in the name of philosophy in the essays under review, which demands attention. It is logically the only basis upon which homœopathy can rest. That it is an insecure basis will be self-evident. The author elaborately affirms that experience weighs neither in favor of nor against the fundamental principle of homœopathy, *similia similibus curantur*. That principle is held to be proved "by exclusion" to be the "only possible law of cure," and if theory

does not agree with facts, "so much the worse for facts."

True, this most astounding teaching is nowhere set forth in so many words as a terse and citable proposition; but it permeates the book. The author avowedly sets out to discover by *à priori* reasoning a "law of cure;" his reasoning is professedly abstract throughout, and nowhere in his studies does he appeal to the lessons of experience for confirmation of his assertions. Moreover he says, apparently unconscious of the contradictions involved: "Statistics regarding results in homœopathic practice may afford *evidence* of the truth of *similia*, but should never constitute our *reason* for the choice of a remedy as homœopathic in a case under treatment. The *reason* for this choice should always be that the medicine chosen is capable of producing unmodified dynamic effects similar to the disease-effects manifested in our patient." What kind of "reason" that may be, which is independent of evidence, we cannot imagine. Again we read: "To base practice simply on evidence is empiricism." In other words, the results of treatment are to have no bearing upon the selection of remedies.

Still more plainly is this strange doctrine found in the following: "History says that Hahnemann's first suspicion that *similia* is the law of cure was an induction from the premises—that cinchona cures malarial patients, and that the effects producible by cinchona are similar to those producible by malaria. *It need not shake our belief in homœopathy to discredit these premises.*" Indeed, one cannot attentively read the various essays in this volume without becoming convinced that the author would believe in and teach homœopathy—we do not say practise it—though he had never thought that he had cured a patient by it; though he had never heard of anyone else having done so. He would say: "The law is true, our application of it defective."

Professor Mack, we believe, fails to grasp the meaning of the term "law" as applied to the processes of nature. A law (fundamental principle) of nature, as expressed by men, is simply a terse generalization—an induction—founded upon a multitude of observed facts. It is the briefest expression which will include a certain group of relations learned by experience. It has nothing in common with the law (statute) which is made by parliaments, autocrats, or mobs. A law of men may be disobeyed; may fall into desuetude; may be repealed. A law of nature is not related with the possibility of neglect or disobedience; and, flowing as it does from the eternal constitution of things, is eternal as the Maker of all things.

The only means by which man can arrive at a knowledge of natural laws is by observing their operations. It was by such observation that Newton was led to the profound generalization which we know as the "law of gravitation." He tested the truth of his hypothesis by comparing it with the facts of experience; and it was not until the revised measurement of the terrestrial meridian had enabled him to revise his calculations and prove the correspondence of fact with theory, that this true philosopher announced to the world that the falling moon obeyed the same law as the falling apple.

But small need be our wonder that our author decries observation and experience. Observation and experience, continually accumulating, show the fallacy of homœopathy, even as an occasional empirical guide in practice, to say nothing of its claim to be a universal and exclusive system of cure. Though Professor Mack says it is "without flaw," he himself demonstrates its inadequacy in the confession that it must be supplemented with prophylactic, palliative, antidotal, and other useful measures. Though he lauds it as the only reasonable system, he himself exposes its foundation upon unreason in the warning to students not to attempt to discover in their investigation of the powers of therapeutic agents "how a particular effect is produced."

That the intellect often forges for itself heavy fetters of theory is well known; and yet one is tempted to inquire why an author, who so clearly shows that *useful treatment is not homœopathic*, did not go one step further, and learn that *homœopathic treatment is not useful.*

WHAT TO DO FOR INCIPIENT CATARACT.[1]

BY EDWARD JACKSON, M.D.,

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I CLOSED a paper on the "Diagnosis of Incipient Cataract," read before this Society in 1885 and published in the *Transactions* of that year, with these words: "Many interesting questions arise with reference to the etiology, prognosis, and management of growing cataract. But their profitable consideration and elucidation wait upon accurate and complete diagnosis—diagnosis in the broad philosophical sense, that rests not on naming a morbid condition present, but which, through due consideration of all possible pathological factors, traces the connection of symptoms to their cause." The present paper is in direct continuance of the line of thought then taken up.

The first thing to be done in any case of cataract is to complete the diagnosis by a careful study of all the evidences of departure from ocular or general health; for "it may be assumed, as a rule, that

[1] Read before the Medical Society of the State of Pennsylvania, June 4, 1891.

when the lens, by its opacity, gives evidence of impaired nutrition, it does not suffer alone. And that when cataract is noticed, instead of accepting it as the cause and explanation of all existing symptoms, we should be aroused to new diligence in the search for deeper and probably more important lesions." Not only are concomitant lesions to be sought or excluded, but I believe that we are now in position to learn something, perhaps much, with reference to the causation of cataract; such knowledge will enable us to render our patients material benefit in preventing the occurrence or advance of the condition, and in certain forms of opacity we may even be able to secure some improvement in the transparency of the lens.

From habitually speaking of certain forms of cataract as "senile," we have come too commonly to regard them as simply a result of the necessary and unavoidable change brought about by age, in the same sense that the loss of accommodation or the whitening of the hair is a senile change. Such a view, however, is not in accordance with the facts. Cataract is not confined or nearly confined to the oldest persons. While I am not prepared to give statistics on the subject, my impression is that opacity of the lens commences no more frequently and progresses less rapidly after the age of sixty than between the ages of forty-five and sixty. Moreover, a large proportion, probably a majority, of those who live to extreme old age, remains free from any opacity whatever of the crystalline lens. Even when cataract develops, it is usually not regularly progressive; in a very large number of cases it becomes stationary and remains so throughout life. Many such cases have been reported. In the *Royal London Ophthalmic Hospital Reports* for 1867 is recorded one that is of especial interest, because a drawing of the original condition had been made by William Bowman, and after eighteen years there was no material change in the degree of opacity. I well remember a case, seen in the service of Dr. George C. Harlan, in which we agreed that the appearance of the opacity indicated its probably rapid increase. The patient received this opinion very quietly, and explained her complacency by stating that she had been told the same thing six years before, while her sight had not grown worse since then. Of ten patients seen by me over ten years ago, whose histories I have been able to follow to the present time or until the death of the patient, in but one has the lens been extracted, and in but one other was there a mature cataract. Six died with cataracts still immature and two are still living, or were a few months ago, without any very great increase in the degree of opacity of the lens. The fact that in comparatively few of the eyes that present incipient cataract a condition is reached requiring extraction of the lens emphasizes the importance of our present subject, and seems to indicate that cataract is a senile condition in much the same sense as apoplexy or chronic interstitial nephritis.

The complete diagnosis of a case of incipient cataract usually reveals a certain degree of ametropia that in general should be corrected. I remember a case, sent to me over five years ago, supposed to be nearly blind and ready for early operation, in which the correction of the hyperopia gave vision of $\frac{5}{10}$ths in one eye and $\frac{15}{15}$ths in the other; the vision is still sufficient for all the ordinary demands of life. Hyperopia is the most common local defect in these cases. Very often it is combined with astigmatism, and at the age at which cataract most commonly occurs we frequently encounter cases with high degrees of regular astigmatism that deviate from the rule in that the meridian of greatest refraction is at or near the horizontal instead of the vertical. Such cases may readily be overlooked or be regarded as cases of irregular astigmatism. Myopia, allowing the patient to see near objects without the use of glasses, the so-called second sight of old persons, is also often a precursor or accompaniment of opacity of the lens. Whatever the form of ametropia, the improvement of vision obtained by its correction is quite as important to the patient, and is quite as likely to be appreciated by him as the same, or even a somewhat greater, degree of improvement wrought by operation.

It is uncertain in what degree accommodative strain is a direct cause of opacity of the lens, but it is probably causative to a considerable degree. Certainly in many cases opacities of the lens first appear at the age when accommodative strain from advancing presbyopia is at its height, and becomes stationary when the strain is removed, either by glasses, by discontinuance of the effort of using the eyes, or by complete loss of the power of accommodation. If in such cases the opacity be not primarily due to the eye-strain, it certainly is made worse by the strain.

We have yet much to learn about the etiology and treatment of cataract. Our ideas are far from clear, but amid the haze there stands out clearly the fact of the relation between choroidal disease and cataract. It has long been known that myopic eyes presenting serious choroidal changes are especially liable to cataract. It is also generally recognized that certain occupations, especially glass-blowing, strongly predispose to both cataract and choroiditis. I have noted that blacksmiths and others who work with heated metal, and professional cooks, exhibit this especial liability. In a large majority of cases of incipient cataract the opacity appears first and is most advanced in the lower quadrants of the lens, particularly the inner or nasal quadrant. The only

rational explanation of this that I know of is that these quadrants of the lens depend for their nutrition principally on the adjoining portions of the choroid, which are the portions most exposed to the glare of light and heat from above, and are therefore most liable to and most deeply involved in chronic choroidal inflammations.

Many surgeons, too, have noted the frequency with which the ophthalmoscope reveals choroidal changes when the opaque lens has been extracted, or rather the extreme rarity of the absence of such changes; but it is only recently that a fellow-member, Dr. S. D. Risley, in the *University Medical Magazine* for March, 1889, and again in a paper read at the recent meeting of the American Medical Association, has completed the demonstration of the connection between choroiditis and cataract by extensive and careful clinical study of the subject, including a series of cases of incipient cataract, in 70 per cent. of which one or both eyes presented demonstrable disease of the choroid.

It has long been recognized that the vitreous body and the crystalline lens are equally dependent on the uveal tract for their supply of nutrient fluid, and the connection between choroidal disease and vitreous opacities has been clearly recognized. It seems strange that more importance has not been attached to the relations of such disease to opacities of the lens. It cannot be doubted that the failure to recognize such a relation has in practice led to neglect of patients with cataract. No one would tell a patient with commencing or recently acquired vitreous opacity that nothing could be done for it, unless in the course of time it became so dense as to justify a resort to an operation, and then that tearing it asunder might partially restore sight. We treat such opacities mainly through the choroiditis that accompanies them, often with improvement and sometimes with complete restoration of vision. The treatment of opacities of the lens cannot lead to a similar restoration of that part to its original integrity, for we have to deal with a structure practically composed of non-living epithelial substance, instead of a connective tissue; but such treatment may in the one case be just as efficient in preventing further advance of the opacity as it is in the other. There are a few cases of diffuse clouding of the lens that I am satisfied, under appropriate treatment, clear up in quite an appreciable degree. Certainly no patient with cataract has justice done him until evidence of choroidal disease has been carefully sought, and if discovered met by treatment.

The treatment of choroidal disease, particularly the chronic inflammations, is too extensive a subject to take up in detail here, but these are its principal general features: 1. The relief of eye-strain by the correction of errors of refraction; making good deficiencies of accommodation by means of the proper glasses, and strict moderation in the use of the eyes. 2. Avoidance of excessive exposure to light and heat, whether the excess be in the intensity of the light or in the length of the exposure; this may involve change of occupation for the cook, the blacksmith, or the fisherman, as well as the employment of dark glasses and of other more usual precautions. 3. Attention to the extra-ocular conditions pertaining to the general nutrition, for these powerfully influence the structural and functional perfection of the nutritive coat of the eye.

This last field, with joint investigations carried on by the ophthalmic specialist and the general practitioner in close association, promises much. Few general practioners, perhaps, would be able to observe and record the minute changes that mark the course of choroidal disease in a progressive, a stationary, or a regressive,[1] incipient cataract; while no one but the regular medical attendant could steadily follow the course of the general health and systematically carry out a line of treatment. That opacity of the lens does, as a rule, appear and progress mainly during periods of impaired general nutrition, and that there is a tendency to an arrest of its progress with improvement in the general health, may be regarded as certain in a large number of cases.

From time to time it is claimed that cataract has been cured without operation. The popular application of the term cataract, however, is so loose and indefinite, and the improvable or curable diseases that may be associated with opacity of the lens are so numerous, that one who understands the subject and is acquainted with the history of past errors in this direction is always tempted to summarily dismiss all such claims.

One of these alleged remedies that in various forms has repeatedly been put forward is manipulation of the globe. It is worth referring to now, because Dr. R. Kalish, of New York, has recently narrated some cures of cataract by a form of manipulation, conjoined with the instillation of a solution of boric acid in rose-water and glycerin, and with general medication. Dr. Kalish's reports[2] of his cases seem too rosy; they do not give sufficient evidence that the phenomena have been subjected to the searching white light of scientific scepticism; they remind

[1] Let this use of the word regressive not be misunderstood. It is not meant to imply that any considerable number of opacities of the lens diminish in degree or that any entirely disappear. So far as I know it is only strictly applicable to the few cases of diffuse clouding of the lens already referred to, and to these for comparatively brief periods of their duration. I hope that it may become more widely applicable to these, but at present the most we can expect for any considerable number of cases of incipient cataract is that they will become stationary.

[2] Medical Record, March 29 and December 30, 1890.

one of a recent paper read before a homœopathic society narrating five cases—one in the person of an "allopathic physician"—in which great improvement took place after the use of "iodoform 3x." Still, in this connection it is worth while to note that Mr. J. T. Thompson, of Cardiff, England, has reported[1] a case in which, after a Foerster's operation for the artificial maturation of cataract by iridectomy and the stroking of the lens through the cornea, the vision was first reduced to counting fingers at three or four feet, and then improved, with actual clearing up of the opacity of the lens, until the patient, depending on this eye, was able to read moderate-sized print and to do her housework. It is probable that manipulation may influence the nutrition of the lens, and it is quite possible that it may cause diminution of a certain form of opacity of the lens. The subject is probably worthy of further investigation.

The dilatation of the pupil by the use of a weak mydriatic solution when the opacity is confined to the centre of the lens, is a measure that has long been recommended in our text-books. It is of service in a few cases. In a greater number of cases in which the periphery of the pupil is involved, and especially when the change in the lens has given rise to irregular astigmatism without much actual opacity, a condition that may continue for years, considerable relief may be afforded by causing contraction of the pupil by means of a weak solution of eserine or pilocarpine.

Even if all treatment fails to arrest the progress of the opacity of the lens and useful vision is lost, it is not, as formerly thought, needful to wait until the whole of the tissue of the lens becomes opaque before proceeding to extraction. Aside from Foerster's operation for hastening maturation, the extraction of immature cataracts is not so difficult and uncertain as it was formerly supposed to be. Peripheral capsulotomy and the washing out of clear cortex by some such method as that advocated by Dr. Lippincott at our last meeting, reduce the extra risks of such extraction until they are very slight.

In the present state of ophthalmic surgery, instead of saying to a patient, "You have cataract; nothing can be done for it now; you must wait till it ripens and undergo an operation; then, perhaps, with strong lenses you will be able to see again;" it is nearer the truth and a better performance of professional duty to say, "You have a commencing opacity of the crystalline lens; it is essential that you take good care of your eyes, using them moderately and with the proper correcting lenses; you must pay careful attention to your general health and have the proper treatment for diseased conditions that may be causing this opacity. If you are able and willing to attend to these things the probability is that you can preserve your sight for a long time, perhaps throughout life; and even if this is not granted, you will be placed in the most favorable condition for the restoration of vision by a comparatively safe and painless operation as soon as your vision has failed so far as to be no longer useful."

[1] Royal London Ophthalmic Hospital Reports, December, 1890.

PNEUMO-THERAPEUTICS.[1]

BY DR. HOVENT,
OF BRUSSELS.

BATHS of compressed or rarefied air are given by means of seven iron chambers of varying capacity, some being capable of comfortably containing from two to ten persons. Each chamber is well constructed; it is supplied with several windows of glass two centimetres (three-quarters inch) thick; it has a duplicated door, or perhaps better expressed, two doors enclosing a lobby, in which the doctor, entering by the outer door, can shut himself, and then equalizing the pressure, can open the inner door and speedily reach the patient for any purpose, without great alteration of the pressure in the chamber. Another smaller door, also duplicated, serves for the purpose of handing to the patient books or whatever may be desired. Electric-bell, elbow-chairs, toilet-tables, manometer, thermometer, hygrometer, etc., are all at hand.

From the chamber so described emerge six pipes, leading to the underground tanks of 1, compressed; 2, rarefied air; 3, nitrogen; 4, oxygen gas; the remaining two pipes are for the purpose of purifying the air. Each of the first four pipes is attached to a little tank which permits of the measurement of the quantity of air, nitrogen or oxygen introduced into the chamber, or of the quantity of air removed.

The large tanks in which the air or gas is compressed, or rarefied, are ten in number. Each holds several thousands of litres. The compression or the rarefaction of air or gas is obtained by means of a gas-engine of eight-horse power. The tanks will bear seven or more atmospheres of pressure, or a corresponding degree of rarefaction.

The manipulations are as follows: If it is desired to place the patient in a chamber, and the pipe connecting the chamber with the tank of compressed air, for instance, is opened, this compressed air rushes in; its quantity can be regulated according to circumstances. The reverse takes place if rarefied air is to be used; the air of the chamber rushes out, and the patient remains in a relative vacuum.

One serious and even capital drawback to the

[1] Abstract of a communication to the Philadelphia County Medical Society.

employment of air-baths lies in the fact that in the course of the two hours, the duration of an ordinary sitting, the air within the cabinet soon becomes foul from the processes of respiration, perspiration, etc. The establishment at Brussels is the only one in which this inconvenience is efficaciously overcome. The air is being constantly withdrawn from the occupied chamber, and purified by being passed through several iron Wollf's jars containing chemicals, to be again introduced, the same degree of positive or negative pressure being always maintained.

It may be desirable to impregnate the atmosphere of the chambers with the vapor of certain medicinal agents; it is an easy matter to place the substance to be used in the path of the air current, or more simply to put some drops of an essence on boiling water into the chambers. Pumiline essence I frequently and successfully use.

The compressed air bath more completely expands the pulmonary vesicles and increases their elasticity; the diaphragm and the base of the lungs descend lower; the respiratory process is more perfectly and less frequently performed; the peripheral circulation is less active, with some degree of decongestion of the skin and the mucous membranes (nasal, laryngeal, pulmonary, etc.); the pulse is less frequent and more full; the appetite and strength increase rapidly; the nervous system is undoubtedly invigorated. One may observe that these effects are corollaries of one another, and result either from mechanical or chemical action; indeed, the oxygen of compressed air is no longer oxygen, but some form of ozone.

The rarefied air bath has not been so well studied; nevertheless, it is employed with much success by some practitioners, who seek in it a reproduction of mountain atmosphere. It has also been recommended for rickety children, when the thorax is deformed. Recently it has been used alternately with the compressed air bath, when a doubt exists as to whether a patient should be sent to the mountains or to the seashore. The therapeutic uses of the air-baths are very numerous, but easily deduced from the foregoing considerations.

Asthma is the principal affection for which compressed air baths are employed. Eighty per cent. of recoveries are obtained after from twenty to sixty sittings. During the first sitting the dyspnœa disappears when the pressure of air is sufficient; this result becomes permanent only after a number of sittings.

In pulmonary emphysema the air-bath empties the vesicles and increases their elasticity, so that the dyspnœa diminishes. The first sitting is usually followed by a notable improvement. As in asthma, the success is generally striking and permanent. Pulmonary congestions, pulmonic processes, preceding or following pneumonia, and hæmoptysis, are cured mechanically, since the compressed air provokes anæmia of the pulmonary tissues. Chronic bronchitis and bronchorrhœa are always improved, so far as concerns dyspnœa, cough, expectoration, and general health. The first effects of the treatment are an increased expectoration, up to the point of completely ridding the lungs of mucus, and simultaneously a decongestion of the respiratory mucous membranes. The last action must be invoked in explaining the beneficial influence of compressed air in coryza, chronic pharyngitis, and laryngitis, and in that exaggerated susceptibility of the mucous membranes, as a result of which the patient is constantly exposed to the danger of catching cold. I have recorded two cases of chronic amygdalitis, in which resection had been contemplated, and in which I obtained complete cures by compressed air baths.

In whooping-cough, "the beneficial action of air-baths is undeniable," said Dujardin-Beaumetz. The cure is obtained after from ten to fifteen sittings; and generally the child gains from one to three pounds in weight. Jaccoud charges with gross neglect the physician who does not submit his consumptive patient to aëro-therapy. Oertel thinks the compressed air treatment far superior to climatic treatment in any country. Professor Bertin (Montpellier) has recorded five cases of recovery in consumptives in the third stage.

Heart disease had long been considered the only drawback to aëro-therapy, but since I have successfully treated a number of cases with cardiac complications, I no longer hesitate to treat such cases, only using certain precautions.

In catarrhal deafness compressed air effects a natural catheterism. I have not infrequently seen patients suffering from asthma or other complaints emerge from the chamber declaring that their hearing was better than for many years.

Dujardin-Beaumetz says: "Compressed air baths are to be preferred to any other method of treating chlorosis, anæmia, diabetes, albuminuria, and gout."

Obesity, also, is favorably influenced, as a result of the acceleration of organic combustion, and the more active elimination of urea and carbonic acid.

In conclusion, I must add that Dr. Arntzenius has cured some cases of neurasthenia, and that I have recorded three observations of dysmenorrhœa permanently cured by a pneumo-therapeutic course. I think these results are due to the general invigorating power of the treatment.

Professor Klug, of Klausenburg, has been unanimously elected to fill the Chair of Physiology at the University of Budapest, made vacant by the death of Jendrássik.

HOT INFUSION OF DIGITALIS IN THE TREATMENT OF PNEUMONIA.

BY E. P. HERSHEY, M.D.,
OF DENVER, COL.

DURING the past three months, excellent opportunity has been afforded me to test the value of the treatment of pneumonia by means of large and frequently-repeated doses of the infusion of digitalis, given early in the attack. The marked benefits resulting in a few cases thus treated last fall suggested its great importance and bolder use. In twenty cases, the treatment was commenced by the administration of ten grains of the mild chloride of mercury, together with a tablespoonful of the infusion of digitalis, given every hour, as hot as the patient could drink it. In from six to ten hours, profuse perspiration occurred in every case, followed in twelve cases by a normal temperature. In three instances, the temperature, without the use of any antipyretic, dropped to 100°, in four, to between 101° and 101.5°, and in one, to between 103° and 105.5°. In no case was the temperature below 103° when first seen, and in all but one, it was ushered in by a distinct rigor. In all the cases the characteristic rusty sputum was present, but its short duration showed clearly that the inflammatory process had been cut short.

The severest case was that of G. J., a laborer, aged thirty-two, in whom there was violent delirium from the outset. The patient, having felt ill for nearly twenty-four hours, had a violent chill at 4.30 P.M., February 25th. At 6 P.M. the thermometer showed a temperature of 105.5°; the was pulse 130. His attendants had him strapped to the bed. Crepitant râles were heard at the base and over the middle lobe of the right lung, anteriorly and posteriorly. The patient was given ten grains of calomel, followed in one hour and a half by a tablespoonful of a hot infusion of digitalis, the latter being repeated every hour, despite the fact that the temperature at 11 P.M. had fallen to 103°, at 5 A.M. to 101°, and the pulse to 115, with a general improvement of all the manifestations of delirium. At 6 A.M. there was profuse expectoration of rusty-colored sputum, that continued for twenty-four hours. On the third day the temperature returned to 105°; after active purging, it fell rapidly. On the morning of the fourth day the pulse had dropped to 50, the temperature to 96°. The infusion of digitalis was discontinued, and a combination of camphor, strychnine, and quinine given. Convalescence was rapid, and just ten days after the beginning of the attack the patient was up and about. The loss of weight in this short attack was remarkable. At the beginning of the attack the man weighed about 168 pounds; on March 7th he weighed 144½—a loss of 23½ pounds.

That the hot infusion of digitalis acts quickly upon the cardiac muscle that forces the blood through the affected area and thus to a marked degree overcomes the dyscrasia, is probably the *rationale* of the action of the drug. The use of a large dose of calomel, by reducing the consistency of the blood, takes the place of the old-time method of bleeding.

Since investigating this subject, with the view of publishing the results obtained, I have read with no little interest the report of Petresco,[1] who used the remedy still more heroically, making an infusion of ten grains of the powdered leaves instead of seven, to the ounce, and giving a tablespoonful every half hour instead of every hour. There can be no doubt that the results obtained in the cases reported were due to the solution being given hot; I have found that, in the use of drugs intended to act quickly upon the circulation, their diffusion is more rapid if given hot. This method of administration was suggested to me by Dr. D. D. Stewart, of Philadelphia, who first reported that the administration of sulphonal in hot water gave better and more rapid results than when the drug was given dry or in cold solution. In the twenty cases treated no ill results followed these large doses of digitalis. However, it would be advisable to watch the circulation; in case of a sudden lowering of the pulse-rate, the infusion should at once be stopped, for this is an indication that the desired effect of the remedy has been obtained; should slow pulse and low temperature persist, nothing will stimulate better than camphor, quinine, and strychnine, in quantities suitable to the case. Alcohol was not used until the temperature had subsided. In none of the cases was the so-called standard remedy, carbonate of ammonia, used. Further investigation will be made with this method of treatment, and when a sufficient number of cases has been treated an additional report will be made. At present this method of treatment has yielded me far better results than any other.

A CASE OF MULTIPLE SARCOMA.[2]

BY AMAND N. RAVOLD, M.D.,
INSTRUCTOR IN BACTERIOLOGY, ST. LOUIS MEDICAL COLLEGE.

LAST June, while making a visit at the Good Shepherd Convent, I was asked to see one of the inmates, a penitent, who was suffering with a severe and persistent pain in her leg.

The patient was a handsome, vigorous, healthy-looking young woman, twenty years of age. She was cool and deliberate, and answered all questions frankly and truthfully. She said that for about a week she had been troubled with a constant dull, throbbing pain in her right leg, which from the beginning had steadily increased in severity. At first

[1] Lancet, April 18, 1891, p. 895.

[2] Read before the St. Louis Medico-Chirurgical Society, April 21, 1891.

she could detect nothing abnormal at the seat of the pain, but for the last few days she had been able to feel a small hard lump there. During the day while at work it did not annoy her much, but at night, and especially when in bed, it was worse, and for the last night or two had interrupted sleep. It had not as yet interfered with walking. On inspection I found nothing abnormal in the appearance of the leg, but about six inches below the patella, just on the inside of the tibia in the connective tissue between the muscles, I found a small hard ovoid mass about the size of a pecan, that felt like an enlarged gland and that was not freely movable. It appeared to be held in place by strands of tissue that ran into it from all sides, so that attempts to move it seemingly tightened these strands and caused a great deal of pain; simple pressure, though annoying, was not so painful. There was no history of a sore on the limb, nor were the glands in the leg, or thigh, or groin enlarged. Her health was good and had always been so. Her father and mother were living and in the best of health, their parents having been hard-working, long-lived people, with no history of malignant tumors, syphilitic or tuberculous diseases in their families. The patient's mother afterward confirmed these statements. I concluded that the tumor was a malignant growth, but of what kind I could not decide. Tuberculosis was excluded by the history, and yet the growth felt very much like an enlarged gland, and it certainly was encapsulated. Sarcoma it might be, but in the beginning, as a rule, sarcomatous growths are not accompanied by pain. Carcinoma it resembled more than anything else, but no history justifying the diagnosis could be obtained. I was quite certain that it was non-syphilitic. I told the patient that the only way to cure her trouble, since the infirmarian had failed to relieve her pain, was to remove the growth. This she mildly but firmly refused to have done, unless after a fair trial I should fail to afford her relief by medication. I am sorry to say that I consented to this arrangement, but I told her that the growth was a malignant one, and that although relief from the pain might follow the medicine, cure was possible only through surgical interference.

I ordered iodine to be painted on the skin over the tumor, and gave a prescription containing: Potass. iodidi, gr. 5; potass. bromidi, gr. 10; morph. sulph., gr. $\frac{1}{8}$; to be taken three times a day.

The date of this visit was June 24, 1890. I saw her again July 4th. When she entered the room I noticed that she was quite pale and that she limped a little, and was evidently suffering a great deal of pain. She said that for the last two days she had had pains in her left hip-joint and right groin, and that in the groin two lumps had made their appearance. On examination I found the mass in the leg fully twice as large as when I first saw it, and very painful to pressure. In the right groin just below Poupart's ligament two superficial glands were enlarged to about the size of an English walnut, and extremely tender to the touch. I was unable to find a growth of any kind about the hip, though pain deep in the joint was complained of. On my demand, Dr. H. H. Mudd was called in consultation. He visited her the same day, and advised an immediate operation. She again positively refused to be operated upon. He suggested that the sedative mixture be continued. In place of iodine, mercurial ointment was smeared on a piece of chamois skin and bound over the growths. This treatment and others that were afterward substituted for it failed to afford any relief. The mass in the leg grew at a fearful rate; within two weeks she was confined to her bed, unable to use her right leg, which was now twenty inches in circumference and exceedingly painful. The growth in the groin was painful, had spread to all the neighboring glands and was pushing its way through the tissues out upon the thigh, the abdomen, and down along the vulva. Within another week a swelling appeared over the upper part of the sacrum and spread rapidly. On the right elbow another growth showed itself, grew very fast in, about, and around the joint, and finally ankylosed it. About a week after this she complained of a feeling of fulness in her left eye, and on close inspection I could see that the eye bulged slightly, so that six weeks after the patient was first seen she was bedridden and suffering with five rapidly growing tumors. They grew in the following manner: From the gland-like encapsulated enlargements the growths spread in every direction, infiltrating and destroying all tissues save bone. The skin involved took on a brownish-yellow hue, and became thick, coarse, and harsh, resembling more the leather on a pig-skin saddle than anything with which I can compare it. In the skin and under it the blue tortuous veins could be distinctly outlined, while at occasional intervals telangiectatic collections of bloodvessels appeared, burst, and formed small blood blisters, which in their turn would break, discharge, and leave a quickly-healing superficial ulcer. The mass felt semi-solid and elastic to the touch, and in some places nodular. The pain was still dull, aching, and throbbing in characacter, persistent, but periodically worse or better.

She bore her sufferings with remarkable fortitude, but when asleep she would groan or cry out in distress. Opium afforded her rest, especially at night, and it did not interfere with her appetite, which remained good. The bowels throughout the disease were regular. About this time the pains in the leg changed for the worse, became lightning like in swiftness, and burning or tearing in severity. She said it felt as if some one had seized the mass with a red-hot, long-toothed vice, and was trying to crush it. The attacks occurred without apparent cause or warning, sometimes as often as every three hours, but, as a rule, not more than once a day. Terrible in intensity, they varied in length from a quick flash in and out of the tumor to those of several seconds' duration, and then vanished as quickly as they had come. She now became emaciated, showed marked cachexia, and became very irritable. Her cheerful look gave way to one of anxiety and despair. The mass behind the eye grew at an appalling rate, shoving the eye before it downward and forward as low as the level of the mouth, giving her a frightful

appearance. As she suffered no pain from it she refused to have it enucleated. The swelling in the groin had grown so large that it now turned the thigh outward and fixed it in that position, compelling the patient to lie on her back all the time; the tumor at the right elbow prevented the use of that arm, so that she was practically helpless. The growth at the sacrum had spread in all directions, and eventually broke down to form a large suppurating bedsore fully ten inches in diameter. This the nurses were unable to prevent, as the patient had become so apprehensive of the painful seizures, and so irritable and helpless, that she refused to allow them to move, or touch, or properly cleanse her. All through the hot month of August the patient's sufferings were horrible in the extreme. Early in September she complained of a difficulty in swallowing, and on examination a tumor was discovered growing between the œsophagus and the spinal column, on a line with the lower end of the larynx. It grew rapidly, soon prevented deglutition, and began to seriously impede breathing. Fever, which was contemporary with the formation of the bedsore, and probably due to absorption of the septic products from it, now became high and continuous. Finally, unable to take nourishment, and exhausted by fever and pain, she died on the 21st of September.

The mother of the girl refused to allow a complete autopsy to be made. I nevertheless secured a large piece from the mass in the leg at the sight of the original tumor, which, upon examination by Dr. H. C. Hartmann, proved to be a small round-celled sarcoma.

THE TREATMENT OF TINNITUS AURIUM.[1]

BY LAURENCE TURNBULL, M.D.,
OF PHILADELPHIA.

IT is not the object of this paper to dwell at length on the treatment of the various forms of tinnitus, but to omit a discussion of those that are well known and treated by every medical man, as for instance, the tinnitus dependent upon the presence of cerumen, pressing on the membrana tympani, that due to inflammation or abscess in the meatus, to an exostosis in the meatus, to catarrhal processes in the tympanum and Eustachian tubes, to perforation of the membrana tympani, or to a polypus in or near the same region, and to dwell on the more obscure forms encountered in disease of the internal ear, labyrinth, and auditory nerve, and on the reflex causes of deafness with tinnitus.

It is now well known that there exists a connection between the auditory nuclei in the medulla and pons and the cortical auditory centres of either side of the brain, and that the "sense of hearing is in greater part situated in the temporal lobe, and more especially in the superior temporal gyrus of this lobe." As Dr. Ferrier has stated,[1] tinnitus may occur in both ears as the result of unilateral irritation, owing to the intimate connection of the auditory nerves and the centres. The cases of sensory cortical discharge, reported by Hughes Bennett,[2] may be advanced, Dr. Ferrier thinks, in support of this view. Ferrier[3] quotes Baginsky as stating that the auditory nerve is in relation with the auditory centre of the cortex through the lower fillet of the corpora quadrigemina and internal geniculate body to the medullary fibres of the cortex.

According to Prof. Jones we may thus classify the principal sources of reflex irritation or inhibition of the auditory nerve: (*a*) Through communications at the nuclei of origin; more especially might this occur through the sensory fifth and tenth nerves; (*b*) through the communications with the facial in the internal auditory meatus, the reflections from this connection being transmitted along the petrosal nerves from the otic and Meckel's ganglia and the parts supplied by them; (*c*) through communications between the nerves supplying the tympanic structures and Meckel's ganglion and the otic and geniculate ganglia; according to Foster, the activity of the tensor tympani muscle is regulated by reflex action; (*d*) irritations may be reflected to the cerebellum or to the auditory centre, and be referred to the ear or to different parts of the head.

The researches of Gaskell are most important as to the presence and course of vaso-constrictor and vaso-dilator fibres (that control the blood-supply by constriction or dilatation of the small vessels); the former originate from the upper part and the latter from the whole length of the spinal cord; these fibres pass through the cervical ganglia of the sympathetic and thence to the various arteries, furnishing (in the case of the auditory nerve) the supply of blood to the ear, more especially through the internal auditory artery from the basilar. The fact is also of importance that certain nerves, as the trigeminus and the cervical sympathetic, appear to be supplied with special "pressor" fibres (McKendrick), that have the power of constricting the vessels, as a result either of direct or reflected irritation, which irritation, as in the case of the cervical sympathetic nerve, must have an important effect on the circulation of the ear.

Of the various other nerve-communications and distributions in the ear that bear on reflex irritation, I would remind you of the connections between the glosso-pharyngeal, fifth, and sympathetic nerves; as, for example, the innervation of the tensor tympani

[1] An abstract of a paper read before the Section of Laryngology and Otology of the American Medical Association, at Washington, D. C., May 6, 1891.

[1] In a letter to Dr. Macnaughton Jones. "On the Etiology of Tinnitus Aurium," pamphlet, pp. 6, 7, British Medical Association, London, 1890.

[2] Lancet, 1890.

[3] Croonian Lectures, 1890.

and stapedius from the otic ganglion and the facial nerves respectively; the communications in the tympanic mucous membrane between Jacobson's nerve, the sympathetic and the geniculate ganglion of the facial nerve; and the other communications between the carotid plexus of the sympathetic, Jacobson's nerve and the otic and Meckel's ganglia, thus bringing all these nerve communications into direct relation with the superior cervical ganglion. The supply of the anterior wall of the external auditory meatus and the tympanic membrane from the auriculo-temporal is important as bearing on reflex irritations from affections of the external meatus, that cause tinnitus when the middle ear is healthy. This sensory supply, be it remembered, is connected with the facial and pneumogastric nerves.

With regard to the physiology of hearing, it does not appear that there are any proofs that separate centres exist for the perception of different kinds of sound. A sensation arising from any irritation transmitted to the auditory centre may be referred to the periphery, that is, to the origin of the nerve-filaments in the labyrinth (McKendrick). The receptive auditory centre is possibly in part situated in the cerebellum. Professor McKendrick (in a communication to Professor Jones) states that an irritation, either in the labyrinth, the auditory nerve, or the receptive centre will "produce a stimulus in the hearing-centre which will cause a sensation or a series of sensations which will always be referred to the labyrinth." Such irritation may be caused by anything that interferes with the normal equilibration of the fluid in the labyrinth or by any direct or reflected irritation of the nerves of the external meatus, the middle ear, or labyrinth. The irritation may follow or attend the presence of adventitious matters in the blood that circulates in the receptive centre, as well as alterations in the blood-supply dependent upon increase or diminution of blood-pressure. This latter condition, occurring either at the periphery, in the cerebellum, or in the course of the auditory nerve, would in itself be sufficient to give rise to irritation of the hearing-centre.

As Professor McKendrick rightly insists, it has to be remembered how exquisitely sensitive the auditory nerve-apparatus is, a fact with which all are acquainted who have studied the physiology of the ear in its perceptive powers and its faculty of differentiating, analyzing, and synthetically arranging sound-waves.

Certain disturbances in the equilibration of the labyrinthine fluid or reflex irritation of any part of the nervous apparatus of the labyrinth or irritation of the auditory nerve-nuclei may give rise to vertigo as an accompaniment of tinnitus. Stimulation of the cerebellum or of the cortical auditory centres may have the same effect; such stimulation may be reflected; under these conditions deafness is not a necessary accompaniment of the vertigo, nor is it absolutely necessary that there should be local aural changes discernible in those presenting the symptoms portrayed by Ménière.

CLINICAL MEMORANDA

REPORT OF A LUMBAR NEPHRECTOMY.

BY WILLIAM D. HAMILTON, M.A., M.D.,
VISITING SURGEON OF THE MOUNT CARMEL HOSPITAL, ETC., OF COLUMBUS, OHIO

ALBERT G., aged thirty-six, a dairyman, of Camp Chase, Ohio, was seen in consultation with Dr. H. P. Woodruff, of Alton, during January, 1891. He had had scarlatina in the preceding August. In October, 1890, he had suffered dull pain in the left loin, which followed the course of the ureter. He had hectic fever, and his urine contained a large quantity of pus. His appetite was poor, and he had lost fifty pounds of flesh in the past year. In the left loin, rather in the inguinal than lumbar region, could be felt a tender lump, shaped like a kidney, but several times the normal size of a kidney. Examination showed his lungs to be sound, and there was no evidence of involvement of the right kidney. Tests made by Dr. F. W. Blake indicated that the daily excretion of urea was about normal. The diagnosis made was that of scrofulous kidney.

A lumbar nephrotomy was done on January 10th, at the patient's home. It was found that the kidney had been converted into a number of cavities, containing thick pus and urine. An incision into the kidney allowed the finger to enter the pelvis. The abscesses were evacuated and a large drainage-tube was inserted at the middle of the parietal incision, three inches behind the iliac spine and near the crest.

On February 24th, forty-five days after the operation, the patient entered Mt. Carmel Hospital. There was free discharge of pus through the drain. He was passing more than a quart of urine daily. On only two or three occasions since the nephrotomy had he been without fever, and his urine had never been free from pus. His appetite was fair, and the sweats had diminished in the past fortnight. He slept well, had no pain and no chilly sensations, but had not gained in flesh or strength. The bladder was somewhat irritable. In the twenty-four hours preceding February 28th, the date of the second operation, he passed thirty-one ounces of urine. On account of the persistence of the symptoms, it was concluded that there were other tuberculous foci in the organ.

At 10 A.M. ether was given, Dr. Woodruff and Dr. Norris being present. Lumbar nephrectomy was done. The loin was washed with soap and water, and then with a carbolized solution. The patient was placed on the right side on a firm pillow, in order to put the other loin on the stretch. A six-inch incision was made half-way between the last rib and the crest of the ilium, parallel to the latter, and, in addition, an incision downward from the middle of the one described, freely exposing the fatty capsule of the kidney. Owing to the nephrotomy the parts were so matted together that the proper and fatty capsules were not easily distinguishable. Having incised

the fatty capsule enucleation was easily accomplished, thereby isolating the pedicle. A blunt needle threaded with coarse silk was passed between the ureter and the vessels, the lateral halves of the pedicle being securely tied. The several pus-cavities were cut into and the caseous contents were emptied, in order to diminish the size of the kidney and to facilitate its removal. It was cut away piecemeal with scissors, a large button of renal tissue, which was expected to necrose, being left to prevent the ligature from slipping. A saturated solution of the chloride of zinc was applied to the stump. The wound was flushed with hot water and dressed with gauze, through which the drains appeared. At 4.30 P.M. of the same day the pulse was 102. The patient was very pale. The dressings were soaked with brownish discharge and required changing. During the night he voided between eleven and twelve ounces of urine. In the six days beginning March 2d, the average quantity of urine passed daily was eighteen ounces. The stitches were removed on March 7th. The portion of the wound in which the pedicle lay was lined with granulations, and as the stump had not separated, it was constricted with rubber tubing. March 27th the stump and ligature came away. April 13th he was discharged convalescent. At one time there was a slight escape of gas and feces from the large intestine into the wound. Firm strapping, with absolute rest in bed, caused the fistulous opening to heal. The man is gaining rapidly in flesh and strength, and is entirely free from fever and sweats. The urine contains no pus and is abundant in quantity.

This is the fourth nephrectomy that the writer has done. The patients have all recovered. The other cases have been reported in the *Medical Register*, of Philadelphia, and the *New York Medical Journal*. In every instance a preliminary nephrotomy was performed. Occasionally this proceeding is curative, and the sequel determines the question whether or not the kidney be hopelessly damaged. However, Mr. Henry Morris, the distinguished English surgeon who has had a broad experience in operations on the kidney, prefers immediate nephrectomy, if the patient's condition permits.

THREAD- OR SEAT-WORMS.

BY W. THORNTON PARKER, M.D., M.M.S.S.,
OF SALEM, MASS.

A RECENT communication in THE MEDICAL NEWS concerning thread- or seat-worms has attracted my attention. Generally speaking, the medical attendant is less frequently consulted than the family druggist when treatment is needed for "worms." Especially in small towns do we find such-and-such a druggist more or less famous for his "worm" mixtures. The doses given by regular practitioners of medicine are sometimes of such nauseating character that it is found almost impossible to administer them to the little sufferers. The profession frequently regards thread- or seat-worms merely as a temporary annoyance, and does not attach great importance to their presence; and yet we often encounter children seriously ill from no other cause. While agency physician among the Chippewa Indians, I was called to attend several children so seriously infested with these parasites that I was unable to prevent a fatal termination. In recent years I have seldom used vermifuges, relying wholly upon the following course of treatment: Copious rectal injections of chloride of sodium in solution, or of boro-glyceride, one to twenty, followed by small rectal suppositories of boro-glyceride, have constituted my regular practice, invariably with good results. A dose of fluid extract of spigelia and senna in the morning, with a moderate dose of castor oil a few hours later, with reasonable attention to errors in diet and particularly as to the water-supply, is all the additional treatment required. It would seem to be unwise to dose the little patients with the risk of injury to the stomach and intestines for the sake of removing some irritating threadworms, the habitat of which is the rectum.

ORIGINAL LECTURES.

PLEURISY WITH SEROUS EFFUSION—ACUTE CROUPOUS PNEUMONIA.

Abstract of a Clinical Lecture delivered at the Bellevue Hospital.

BY ALFRED L. LOOMIS, M.D.,
VISITING PHYSICIAN.

GENTLEMEN: This man, twenty-five years old, was well until five weeks ago, when he was seized with pain in the side, passing up to the shoulder, for which he knew no exciting cause. There was no chill. He found that he could lie most comfortably on the left side. Two weeks ago he began to be troubled with shortness of breath and his appetite became poor. When admitted to the hospital his pulse was 92, the respirations 28, and the temperature 103.2°. Since then, the temperature has ranged from 101° to 103°, and to-day is 101.4°. The pulse has varied from 78 to 98, and the respirations from 20 to 28. The prominent symptom is pain; quite recently there has been added shortness of breath. The fact that dyspnœa was not present at the onset of the attack, would lead us to expect the existence of a serofibrinous pleurisy.

The countenance is not anxious; the right side of the chest does not move as freely as the left. The pulse is about 82, of pretty fair quality. The apex-beat is displaced to the left about one and a half inches, and is a little above its normal position. Hypertrophy of the heart might displace the apex-beat to the left, but it would at the same time depress it. Enlargement of the left lobe of the liver might displace the apex to the left and upward, but not to the extent that we find in this case. Anteriorly, over the upper part of the right lung, there is increased resonance of a tympanitic quality. Posteriorly, the chest expansion is found to be diminished to about an equal extent on both sides. Vocal fremitus is subject to certain variations in connection with pleurisy with effusion, and in order to understand the reason for these, it is necessary to refer to the physical laws governing the conduction of sound-vibration. Sound-vibration is not transmitted with equal readiness through media of different densities. Hence, if the lung be separated from the chest wall by fluid or plastic material, the vibrations of the voice must pass through the lungs, a structure containing air, and then through the exudation, which contains little air. Under such physical conditions, the sound is conducted very feebly, if at all. In certain

cases of pleurisy with effusion, bronchial breathing and increased vocal fremitus are present, while in others, these are absent. Ordinarily, the bronchial tubes are collapsed from pressure, but if the pressure is not sufficient for this, or if the bronchial tubes are very rigid, they may remain open, and so give rise to bronchial respiration, bronchophony, and increased vocal fremitus. In this patient the respiratory murmur is heard only above the middle of the right scapula, and the voice-sounds are a little more intense just at the point where the ear passes below the level of the fluid. Further down these sounds become more feeble, and finally are inaudible. It is probable that in this case the pleural cavity has contained even more fluid than it does at present; the absence of vesicular breathing and the extensive area of dulness, lead us to believe that the entire pleural membrane has been involved. In an uncomplicated case of sero-fibrinous pleurisy, the temperature rarely rises above 101° or 102°; although it has been unusually high in this case, it has not been high enough, nor have the constitutional symptoms been sufficiently severe, to indicate the existence of a suppurative pleurisy. In suppurative pleurisy the temperature is often 104° or 105°, and not infrequently higher than in acute pneumonia. There is also usually much more prostration than is present here. My impression is that the fluid has already begun to subside; this brings up the important question of treatment. The man has been sick for five weeks. If this were your first visit to the case, you would not aspirate immediately, unless the pleural cavity were distended with fluid and there were extreme dyspnœa. Under these circumstances, it would not be safe to leave the patient in such a condition. Some advise aspiration whenever the pleural cavity is two-thirds full of fluid; they claim that by this method of treatment recovery is hastened. My own experience leads me to a directly opposite conclusion, and I therefore prefer to wait, as I shall do in this case, until Nature has had a fair opportunity to remove the fluid herself. There is a great temptation to make an exploratory puncture with a hypodermatic syringe to ascertain the nature of the fluid, but many a serous effusion has in this way been changed into a purulent one. If such a procedure be resorted to, the greatest care must be exercised that the needle be aseptic.

The next patient is a man, thirty years old, who had been engaged in his occupation of a bricklayer until ten days ago, when he was suddenly seized with what he supposed to be chills and fever, as he had suffered from fever and ague a number of years before. Two days later he had another chill followed by fever, and on the following day he began to suffer from pain in the right shoulder, increased by deep inspiration. After two days more, the pain still continuing, but without a return of the chills, a cough developed, accompanied by a yellowish, fairly abundant and tenacious expectoration, that, after twenty-four hours, became of a reddish color. Just one week after the initial chill he was admitted to the hospital, with a temperature of 103°, that on the following morning reached 104°, and is at present 103°. The respirations have been between 30 and 36, and the pulse, that was 104 at the time of admission, has risen to 114. Examination of the urine has detected nothing abnormal. The patient's face has a decided purplish flush, that, in itself, would lead one to make a provisional diagnosis of pneumonia. The pulse is not only full and rapid, but also irregular and intermittent, in spite of the fact that he is taking an ounce of whiskey every two hours. The occurrence of profuse perspiration, in association with an elevated temperature, indicates a tendency to heart-failure. The apex-beat is in its normal position, but the heart-sounds are more indistinct than an examination of the pulse would lead one to expect; what is more important, the first and second sounds are quite feeble, and of about the same length. When, in the course of any acute disease, the heart-sounds present these characters, heart-failure is not an unlikely complication. Percussion shows complete dulness over the right apex anteriorly; auscultation over the same area reveals bronchial respiration and crepitant râles. Pleuritic friction sounds are heard low down on the same side. An examination of the chest, behind, shows distinct bronchial breathing on the right side, with beginning bronchial respiration on the left. Although the examination of the chest, posteriorly, has been made quickly, the effect upon the circulation of the momentary change to the sitting position is shown by a little blueness of the capillary circulation of the body and a more feeble and rapid pulse. Evidently, then, we have here an acute, croupous pneumonia of the right apex, already well developed, and a croupous pneumonia on the left side, that is just beginning. This man denies addiction to the use of alcohol, but when a man of his age and general physical appearance develops an apex-pneumonia, independently of any other disease, you can be almost certain that it is of alcoholic origin. This fact, together with the extension of the pneumonic process to the other lung, renders the prognosis grave. It is by no means uncommon in acute pneumonia for the respirations to reach sixty per minute; and yet this man's respirations have not been over forty; at present they are about thirty-six per minute; he does not appear to suffer from dyspnœa, although, as a rule, dyspnœa is more severe when, as in this case, the pneumonia is situated at the apex. The dyspnœa of pneumonia appears to depend upon the nervous temperament of the patient, rather than upon the extent of the pneumonic process.

The condition of the pulse and capillary circulation would seem to indicate the necessity of increasing the quantity of stimulants, but experience shows that when twelve ounces of whiskey in the twenty-four hours fail to give the heart proper support, a larger quantity will rarely do more than prolong the agony. Such large quantities are of value only in emergencies, to tide the patient over a short period of great danger. Digitalis, in my experience, is not useful, and in many cases is actually harmful; nor do I favor the administration of the carbonate of ammonia. In the early stages of the disease, when the nervous system is overwhelmed by shock, opium is of great service, but later on it is contra-indicated.

I have just come from a consultation in a case of pneumonia with a well-known practitioner of large clinical experience. His whole treatment was summed up in the two words: "food and rest," and this, too, when the patient's temperature was nearly 104°. Last spring, a most interesting research was made into the mortality of pneumonia under the various methods of treatment that had been in vogue at the Massachusetts General Hospital

during the past seventy-five years. During this period pneumonia had been treated by blood-letting, by calomel and antimony, by "the let-alone" method, by the stimulating treatment, and by the antipyretic treatment; when lines were drawn to represent the mortality it was found that, notwithstanding these widely differing methods of treatment, the mortality for the seventy-five years was represented by a nearly straight line. This speaks for itself.

TUBERCULAR SYPHILIDES—PITYRIASIS VERSICOLOR—ECZEMA CAPITIS—TINEA TONSURANS—FAVUS—IODIDE ERYTHEMA.

Abstract of a Clinical Lecture delivered at the New York Post Graduate Medical School.

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GENTLEMEN: The first patient brought to the notice of the class was a man, thirty-three years old, who had become infected with syphilis eight years before. He was admitted to the hospital with a patch on the right side of the face, extending from the root of the nose over the chin and under the eye. The skin was pinkish, infiltrated, and rough; the lesion was a mixture of the non-ulcerating and the ulcerating syphilide and had existed for about two months; it closely resembled lupus erythematosus. The "plugged-follicle" symptom was also present. Lupus is prone to develop in one or more discoid patches about the nose, that, fusing together, give rise to the "bat-wing" shape of the eruption, and to its name, *vespertilio*. The patient gave a history of syphilis and of treatment extending over a few months, but not long enough to eradicate the diathesis. If he had persevered in the treatment, the probabilities are that this late manifestation would not have appeared. The points of especial interest were: the late evolution, the absence of intermediary symptoms, the resemblance of the patch to lupus erythematosus, and the involvement of the follicles. The touch-stone in these doubtful cases is the treatment; in the present instance, a strong mixed treatment had produced a decided improvement.

The next case presented an eruption which, on account of its brownish color, was often mistaken for a syphilide, the case was all the more misleading to the inexperienced, as the patient had had syphilis fourteen years before, and because the eruption showed a tendency to form rings. The disease was *pityriasis* or *tinea versicolor*, a parasitic disease, that did not often form rings. In this patient the eruption was on the sternum and between the shoulders; it gave rise to no thickening of the skin. When an eruption is found distributed over the sternum and trunk to the neck, down on the arms to the wrists, and on the back between the shoulders, but sparing the latter, the case is presumably one of seborrhœa or of pityriasis versicolor. In the former the lesion appears rougher and more inflammatory; in the latter, the lesion shows no signs of inflammation, and microscopical examination of the scales would show the presence of the parasite, the *microsporon furfur*. Following the usual rule of making a thorough examination of the whole body, in the diagnosis of skin diseases, one is surprised to see about the legs, knees, and elbows infiltrated, scaly patches, that if seen independently of the patient's history, one would say were undoubtedly those of psoriasis. The diagnosis, however, in this case was a syphilide with much epidermal proliferation. The patient denied having had an eruption when a young man. Psoriasis usually begins in early life, and commonly appears in the non-syphilitic, although psoriasis may be observed to develop after syphilitic infection.

The parts affected with pityriasis should be well scoured and then washed with a solution of bichloride of mercury or of hyposulphite of soda. The syphilitic element in the case should be treated internally by a strong, mixed treatment, and the patches, after thorough soaking in an alkaline bath, should be well rubbed with the following ointment:

℞.—Oil of cade . . . . . ℥j.
Citrine ointment . . . . . ℥ij.
Vaselin . . . . . ℥j.

The next case was one of eczema capitis, and the child, about three years old, presented a pitiable appearance, with its face raw and oozing, and its scalp covered with pus and sebaceous matter. The condition was undoubtedly brought about by persistent washing and irritation, and usually begins in a small patch in the scalp.

The treatment consisted in correcting the acidity of the stomach by means of alkalies, and in a proper regulation of the diet. About every other day, a powder consisting of two grains each of calomel and sodium bicarbonate should be given; sometimes it is desirable to add a little Rochelle salts. After the crusts had been removed by the local application of vaselin, the following ointment should be kept constantly applied:

℞.—Camphor . . . . . gr. x.
Calomel, Goulard's Extract . . . āā ℥j.
Vaselin . . . . . ℥j.

The attention of the class was next directed to a boy who had a number of small, shiny bald spots and scaly areas in the temporo-frontal region. The trouble dated back five years, at which time he had become infected with tinea tonsurans by wearing a schoolmate's cap. Considering the long duration, the disease had not made great ravages, but showed its characteristic pertinacity. If the disease were eczema there would be some evidence of inflammation, and in so long a time as had elapsed it would have covered the whole face. If one looked only at the bald patches, one might consider the case an anomalous one of alopecia.

The mode of infection in this case clearly pointed out the needful prophylactic measures. The curative treatment consisted in thoroughly shampooing the head and washing with a two per cent. solution of carbolic acid, after which the patches should he epilated and then painted over with the following:

℞.—Chrysarobin . . . . . ℥j.
Flexible collodion . . . . ℥j.

Proper attention to the case might be rewarded by a prompt cure.

In contrast with the foregoing, the lecturer presented a boy, nine years old, who also had a persistent disease of

the scalp. It had lasted two years, but unlike the other case, it showed no tendency to localize itself in small, circular spots. There were dry grayish-green crusts adhering closely to the scalp of the vertex and occipital region. This condition resembled that seen in only two diseases—*i. e.*, impetiginous eczema and favus. In certain places the crusts formed in the shape of a cup around the hair-follicles; on scratching the crusts they broke into powder. The crusts were at first green, but after a time they became blanched. This patient had favus, and after scratching or handling these crusts, one should be careful to thoroughly cleanse the hands, for the disease is liable to attack the epithelial structures and burrow under the nails. Favus of the scalp persisted for years, ultimately leaving the scalp almost entirely bald and converted into a large cicatrix. Favus might also occur on the body, forming the variety called favus of the epidermis. The infectious agent in this disease, the *achorion Schönleinii*, is a vegetable mould often found on rats and mice, and conveyed from them by cats and other domestic animals to persons. This parasite, like that of ringworm, burrows down into the hair-follicles, and finding a favorable nidus there, undergoes rapid reproduction.

The hair should be cut short, and the scalp thoroughly rubbed with vaselin; and wherever the crusts reappear they should at once be removed; otherwise they would be rapidly reproduced. The disease is most intractable; a cure can only be effected by the most persistent treatment. After the scalp had been thoroughly cleansed, it should be washed three times a day with a 1:3000 bichloride of mercury solution, followed by an inunction of two grains of the bichloride of mercury to an ounce of vaselin. In some cases, a strong solution of corrosive sublimate in alcohol (eight grains to the ounce) might be employed; but in all such cases one should be on the alert for toxic symptoms, which, in children, generally begin with pain in the abdomen.

Dr. Taylor then showed the results of treatment in a patient who had been presented to the class with a suspicious-looking indurated ulceration about the nose. The opinion was expressed that the lesion was a benign one, and the treatment (curetting and the application of balsam of Peru ointment) had already resulted in almost healing the spot.

The next case was instructive as showing a syphilitic eruption on one side of the face, and a well-marked iodide of potassium erythema on the other side of the face and on the forearms, that closely resembled a papular syphilide.

Locally, an ointment of equal parts of mercurial ointment and vaselin, containing one drachm of the balsam of Peru, should be applied. Internally, great care should be observed to administer only a minimum dose of iodide of potassium until the system would better tolerate the drug. Both mercury and iodide of potassium were needed; but if the latter were not judiciously administered, the cure would be delayed and the skin lesions aggravated.

Kentucky School of Medicine.—At the commencement of the Kentucky School of Medicine on June 18th, the degree of Doctor of Medicine was conferred upon 155 graduates.

CURRENT LITERATURE.

PREGNANCY AFTER CONSERVATIVE VENTRAL FIXATION OF RETROFLEXED UTERI.

SÄNGER has performed the operation of ventral fixation of the uterus nineteen times, fourteen times with removal of diseased uterine appendages, and five times with preservation of the appendages. He has had one fatal result, not due to the operation, but to septic peritonitis from pyosalpinx. The five cases in which the appendages were preserved are, of course, the only ones in which pregnancy could occur. Of these five patients one was a married woman, one a young lady of the better class, and three were unmarried working-women. The young lady, alone of the five, had not exposed herself to conception. Two of the remaining four became pregnant; the married woman a second time.

The married woman's two pregnancies following the operation took the following course: The operation was performed on December 15, 1887; menstruation ceased in March, 1889. In the early part of the pregnancy the patient had pains, evidently extending from the seat of fixation of the uterus. In the beginning of June the attending physician reported to Sänger that the uterus did not seem to grow directly upward, but seemed to be held at the points of suture. Discharges of blood occurred repeatedly. In August the patient aborted at the sixth month of her pregnancy. The macerated fœtus corresponded in size with a three months' fœtus. Six weeks later, when Sänger saw the patient, she was entirely well; the uterus had become involuted, and was anteverted as before.

In the second pregnancy the last menstruation occurred April 20, 1890. The first movements of the child were felt September 7th. Sänger saw the patient in the sixth month of her pregnancy. She had no complaints of any kind, and had had no bleeding. The pregnant uterus, as regards position, form, and movability, in no respect differed from a normal uterus. On February 7, 1891, the patient was delivered of a dead fœtus by version and extraction. In the latter part of her pregnancy she had complained much of pain in the abdomen and sacrum; ate but little, and for this reason was extraordinarily weakened. According to her reckoning, she was eight days over her time when the waters began to escape. In the last few days fever set in; the fœtal movements were not felt for three days before delivery; through the membranes the cord could be felt still feebly pulsating, but the child was dead when born.

The second patient had had a child four years before the operation of ventral fixation of the womb, which was performed June 21, 1888. Menstruation failed to appear in the beginning of October, 1888, about four months after the operation. A boy was born at full time, without artificial aid, July 1, 1889. The puerperium was normal. Six months later, when the patient was seen, the scar in the abdomen showed a slight separation; the uterus lay as before, anteverted, and, without having been loosened from its fixation, was entirely movable.

Sänger discusses the two pregnancies of the first patient, and shows that neither the abortion in the first pregnancy nor the death of the fœtus at full time in the second is to be attributed to the operation of ventral fixation. He then refers to the following reported cases in which pregnancy has occurred after this operation: Olshausen reports a case in which pregnancy was uninterrupted and birth ran a normal course. Klotz has operated sixty-two times; he has had two normal births with subsequent normal position of the uterus, and one normal pregnancy is still under observation. In eighty-one cases of vaginal fixation of a retroflexed mobile uterus, he has observed three normal labors and has had five normal pregnancies under control. Two of Leopold's nineteen cases have had normal pregnancies and delivery.[1] Pozzi and Baudouin report a case of Routier's in which pregnancy and delivery were normal, and the uterus maintained its fixed position. Vlaccos refers to a case of pregnancy following "hysteropexy." One patient of the six cases reported by Jacobs was in the sixth month of undisturbed pregnancy. Gottschalck reports a case in which hemorrhage and abortion occurred in the pregnancy, and attributes them to the ventral fixation. Sänger does not agree with him.

Sänger discusses the operation of ventro-fixation and its various modifications, and maintains his preference for his own method in conservative ventral fixation. By "conservative" fixation he means fixation with preservation of the appendages of one or both sides, no matter whether the uterus has been movable, wedged in, or fixed; while by "pure" ventro-fixation he means the operation when the uterus is completely movable and both appendages have been preserved.

Since conservative ventral fixation not only most certainly obviates the backward deviation of the womb, cures the disturbances associated with it, and relieves the patient forever from the pessary treatment, while it also does not hinder conception and leads to no disturbance of pregnancy and childbirth, even the puerperium being passed without drawback, Sänger concludes that the operation will at least preserve its appropriate place by the side of vaginal and other operative procedures for the treatment of the retroflexed uterus with normal appendages.

The effect upon conception and pregnancy is at all events the best standard by which to judge of the problem of the artificial antefixation of the retroflexed uterus.—*Centralblatt für Gynäkologie*, No. 16, 1891.

THE DIGESTIVE POWER OF THE ACIDS.

VARIOUS theories have been advanced as to the action of the various acids during the process of digestion. Most of the physiologists believe that hydrochloric acid is the only true acid of the gastric juice, the others being formed from the contents of the stomach and mixing themselves with the former. Some even believe that these other acids are hurtful, and that the function of the hydrochloric acid, in conjunction with the pepsin, is not only to peptonize the albuminoid substances but also to hinder, by preventing fermentation, the formation of lactic, acetic, butyric and other acids, the presence of which weakens and may even completely stop stomach digestion. Alongside of these theories is that of others diametrically opposed, who attribute all the digestive power to the organic acids and to lactic acid in particular. These results have been arrived at by two methods: (1) the examination of the digestive action of a natural gastric juice, the acids of which have been previously determined; (2) artificial digestions in glass tubes, the artificial gastric juice being formed by adding together pepsin and the acid the digestive value of which it is desired to determine.

From his researches in this direction Dr. Georges drew the following conclusions upon the peptonizing action of the acids of the stomach: (1) Hydrochloric acid is the acid which, combined with pepsin, is commissioned with the peptonization of albuminoid substances. (2) Lactic acid, as well as acetic and tartaric acid, are totally deficient in digestive action.

Thoyer having had occasion during the course of the year to make some observations upon this subject, has not been able to confirm the latter conclusion. His experiments have been conducted with every possible precaution and with the greatest care, and he believes that the results obtained are entirely trustworthy. These researches have been of three kinds: (1) The action of acids alone upon the albuminoid substances. (2) The action of pepsin taken singly. (3) The combined action of pepsin and the acids. Various acids were employed—hydrochloric, hydrofluoric, sulphuric, nitric, lactic, acetic, tannic, tartaric, oxalic and citric. These were placed in test-tubes, together with small cubes of hard-boiled white of egg and some filaments of fibrin, and allowed to remain for twenty-four hours in an oven at a temperature of 38° C. At the end of that time the digestions did not appear to have commenced in the tubes containing the white of egg; in the tubes containing fibrin the dissolution of the fibrin was complete, but in neither was found the slightest trace of peptones. This proves that the acids which are contained normally in the stomach, as well as others which may be accidentally discovered there, have not in themselves any peptonizing action. The acid pepsin of Boudault placed in tubes with the white of egg, hard-boiled, and with fibrin, has determined the formation of peptones. If, however, the pepsin is chemically pure, the slightest trace of peptones cannot be found in either the tubes of fibrin or white of egg after remaining twenty-four hours in the oven at 38° C.

In testing the combined action of acids and pepsin, acid solutions of from four or five, ten or twenty, or thirty parts to a thousand have been employed. The pepsin employed was perfectly pure. The experiments were conducted in the following manner: In one series of test-tubes ten cubic centimetres of the precipitated acid solutions were placed, and to

[1] A third case is reported in the Centralblatt für Gynäkologie, April 18, 1891.

these were added two centigrammes of pure pepsin and a cube of one gramme of the white of a hard-boiled egg. In a second series of tubes were placed fifteen cubic centimetres of the same acid solutions, then five centigrammes of pure pepsin and a two-gramme cube of white of egg. Finally, two other series of tubes contained the same quantities of acid solution and pepsin, and one- and two-gramme quantities of fibrin. The results obtained justified the following conclusions:

1. Hydrochloric acid is the acid that, when combined with pepsin, has the most power for transforming albuminoid substances into peptones.

2. Hydrochloric acid does not alone possess the peptonizing property; with it, but to a much less degree, a large number of acids may, when combined with pepsin, give rise to this transformation of albumin into peptone. Among these acids are sulphuric, acetic, oxalic, tartaric, citric, lactic, and hydrofluoric, which possess this property in different degrees.—*Soc. de Biologie*, No. 6, 1891.

METHYLACETANILIDE, OR EXALGIN.

IN the *Bull. Gén. de Thérapeutique*, No. 6, 1891, DESNOS has made a study of the merits of this drug. He says that the chemical formula of exalgin confirms the law established by M. Dujardin-Beaumetz, to wit: that the anti-thermic action will be especially developed in amidogenous derivatives, whilst the analgesic property will be at its maximum in the amidogenous bodies in which for one molecule only of hydrogen, one molecule of a primitive fat, especially of methyl, has been substituted. Exalgin presents itself in the form of a white powder, consisting of long, fine needles, absolutely tasteless, soluble in warm alcohol and in boiling water, but slightly soluble in cold water to which a small proportion of an alcoholic fluid has been added. The physiological effects produced by it in man are very interesting. The action of the drug seems to be entirely exerted upon the bulb and the cerebro-spinal system. Prominent in the impressions produced upon the brain is vertigo. The numerous varieties in which this presents itself are interesting. Sometimes, and this is most frequently the case, very quickly after the ingestion of the drug the patient complains of a slight mist, as of a veil stretched before the eyes, and this is all. This sensation may be fugitive; its duration is very variable, oscillating between five minutes and a half hour. Sometimes the patients have a sensation of rotation within themselves, or yet it is the surrounding objects which appear to them to revolve around them. In a woman it seemed that her bed sank into the floor, another believed that she was incessantly falling to the side of her bed, and one even grasped the opposite side of the bed to escape falling. These extreme cases are very rare. In general the patient is able, notwithstanding the vertigo, to rise and walk. As a rare exception the vertigo is accompanied with vomiting, and also rarely with chills or cold sensations. In certain patients, but rarely, the vertigo coincides with tinnitus aurium, or this may be replaced by heaviness of the head or by cephalalgia, by a tendency to sleep, or simply a state of torpor, which two patients compared to that in which they had previously been thrown by injections of morphine. Nevertheless, it should be remembered that exalgin is no more a hypnotic than it is an anti-thermic. If the patients sleep, it is because the drug has freed them from the pains which had kept them awake. Some other phenomena reveal an action upon the cord and spinal nerves. Thus, sweats are encountered which may be general and profuse, or limited at times to one region of the body, generally to that portion which is the seat of the malady for which the exalgin is administered. Thus, also, frequently tinglings are experienced, extending to all the members and the tongue, or solely to the points where the neuralgia exists. Some patients complain of flashes of light before the eyes.

All doses may provoke these nervous phenomena. Three and three-quarter grains may suffice, but it is generally when eight and a half grains have been injected that they may be observed. Then, again, large doses, eleven or twelve grains, may fail to produce them. In this dose, however, cyanosis may be observed, though of slight intensity, and not in any manner resembling the cyanosis of grave disease of the heart. The appearance of the free border of the lips is scarcely modified, and upon the skin of the upper and lower lip, and upon the naso labial ridge, a slight grayish-blue tint may be observed. This coloration is not of long duration, usually disappearing on the next day. An examination of the blood of patients to whom exalgin has been administered reveals an alteration of the globules, which seem to be almost, if not completely paralyzed, so that the gaseous changes are not carried on in the proper manner. There is also a diminution of the oxyhæmoglobin. Exalgin, therefore, has the property of giving rise to anæmia, although this is not a property exclusively belonging to it, but one that is shared by the other anti-thermic nervines. One of the interesting points in the administration of exalgin is the ease with which it is tolerated by the digestive tube. It does not engender any troubles of the stomach or intestines.

As to the dose of the drug, three and three-quarter grains at times suffice to produce a curative effect, complete and lasting. More than this should never be given at a time, but if need be the dose may be increased to two or three times this amount during the twenty-four hours. As M. Gandineau has shown, a tolerance for the drug may be established, so that in giving successive doses it may become necessary to increase the amount given. The affections in which exalgin is of the greatest service are the neuralgias, especially the facial neuralgias, involving one or several branches of the trigeminal, or the occipital nerve, especially if these are of congestive origin from cold or rheumatism. The anæmic neuralgias are, without doubt, very favorably influenced by exalgin. Intercostal neuralgias have been benefited, as also have been neuralgias of the various plexuses, and the ilio-lumbar pains consequent upon uterine and ovarian disease. The visceral neuralgias,

angina pectoris, and nephritic colic are benefited, as are also painful and hysterical menstruation. The tremblings of paralysis agitans may be controlled by its use.

PARTIAL NEPHRITIS.

CUFFER and GASTOW, as long ago as 1887, wrote that simple interstitial nephritis could be cured entirely or partially, the inflammatory process localizing itself in some portion of the kidney, and this morbid condition being recognized by the constant presence in the urine of a small amount of albumin. In the desire of ascertaining more explicitly the significance and prognostic value of this albuminuria, which, in spite of every possible care, persists in an unvarying quantity in patients otherwise apparently cured, the same writers instituted a series of investigations as to this apparent anomaly, the results of which they have published in the *Revue de Médecine*, No. 2, 1891. They find that the condition is of more importance than would at first sight appear. Relying upon the modern theories it might readily be believed that one had to deal with a physiological or intermittent albuminuria or with an albuminuria of sanguineous or dyscrasic origin. Such, however, is not the opinion of Cuffer and Gastow. They have found that the permanence of the amount of the albumin is the consequence of a permanent lesion of the kidney, of a nephritis which has become partial, with a prognosis much less grave than the persistence of a notable quantity of albumin in the urine would seem to warrant. Their conclusions have been based upon clinical facts entirely, all anatomico-pathological proofs being wanting.

When, they say, in the course of a parenchymatous nephritis one sees, under the influence of a well-directed treatment, all the symptoms disappear, save a certain degree of albuminuria, it is useless to persist in combating this albuminuria from the moment that the rate of the albumin remains constant, no matter what may be the methods employed to cause its disappearance. The nephritis may be regarded as cured whenever all the serious symptoms have disappeared. The albuminuria which persists has an important semeiological significance, in the sense that it indicates a renal lesion, the gravity of which will depend largely upon the existence of the other symptoms that should be taken into account, either œdema or uræmia. Consequently, a persistent albuminuria of a fixed degree, while all the other symptoms have disappeared, indicates that the renal lesion is limited, that the nephritis has become partial. It does not present any gravity, it does not necessitate any continuation of the initial treatment, because if there remains a lesion it is no longer evidence of disease, and the lesion is nothing more than a sort of incurable infirmity. From the therapeutic point of view, these patients have nothing more to do than to exercise proper precautions in the management of this feeble point in their organism. All treatment in this condition becomes useless, and in consequence it may even become hurtful. Now, what is the nature of this albumin? To what should it be attributed? Is it the albumin of the blood, or of serum, or is it a pseudo-albumin? Is it peptonic in nature? Is the albuminuria physiological, intermittent, of a dyscrasic origin, mechanical or nervous? It is not due to peptone or to pro-peptone, because nitric acid and heat produce in the urine of these patients an opaque precipitate of albumin, a precipitate which never is produced with peptones and pro-peptones, the reactions of which are quite different; it is an albumin occasioning all the characteristics of the albuminurias of renal origin. The idea of physiological albuminuria cannot be readily entertained. The patients give a history of an infectious disease, possibly, which has produced a nephritis, usual under these circumstances—a nephritis which has always persisted, since it has not ceased to be characterized by the presence of the albuminuria. This albuminuria is not intermittent, either. It always exists; it is persistent at a fixed or nearly fixed degree, which is not characteristic of an intermittent albuminuria. No more can it be explained by ascribing it to a dyscrasic cause. The patients have not been poisoned, nor are they anæmic, or carcinomatous, or tuberculous. No mechanical reason can be found; no cardiac lesion, no active or passive congestion of the kidney. No arterio-sclerosis exists to explain its presence. It remains, therefore, to explain the persistent albuminuria by the presence of a persistent lesion of the kidney, a nephritis. The whole parenchyma of the organ is not involved; all is not sclerous. There are some healthy renal lobules alongside of others which have been nearly entirely destroyed. This nephritis may remain partial for a long time. It may have subacute or acute exacerbations, each time leaving a little less of the renal tissue to perform the work. In this way some of the glomerules will be entirely destroyed, while at other points there will exist simply a catarrhal desquamation. The patient will remain, therefore, infirm in one portion of his kidney.

The conclusions drawn from these studies are:

1. Whenever nothing will explain the persistence of a fixed and constant degree of albuminuria; whenever none of the therapeutic measures employed against this albuminuria succeeds, while notwithstanding, the patient is enjoying good health, it is necessary, if he has had previously all the symptoms of an acute nephritis, to think of a partial nephritis.

2. It is not necessary in these cases to make even a grave prognosis when the urine contains a considerable quantity of albumin (thirty to sixty grains). The patient is an invalid, but may live, on the condition that he observe certain precautions.

3. It is not necessary to confine these patients to their rooms, to submit them to a severe regimen and milk diet. This will result in anæmia and useless debility. No kind of alimentation has any influence upon the amount of the albumin in the urine.

4. It is necessary that they avoid all chilling and errors of regimen.

5. They must avoid all renal irritation. All medication liable to react upon the kidneys must be

banished. The astringents will be of great service in such patients.

6. If they are attacked with an infectious disease, care must be taken to guard against any renal congestion.

THERAPEUTICS OF SYPHILIS.

DR. E. KREIS, of Zurich, says that, in spite of new methods and new remedies, we are still far from an ideal treatment of syphilis, one which will remove completely the syphilitic virus from the organism without injury. He first discusses the so-called abortive treatment by excision of the chancre.

Neisser believes that it is possible to check the outbreak of syphilis by excising the chancre. Jullien's belief, based upon a series of experiences, is that syphilis may be delayed in its course, or at least weakened, by excising the chancre. In one of his cases the patient had a chancre removed in 1880; he remained under careful observation free from syphilis for four years, and then died of typhoid fever. Another patient, who was operated on in 1881, has remained healthy to the present day. A third patient became reinfected with syphilis seventeen months after the first primary sore had been excised. Leloir's first experiences led him to declare excision of the chancre useless, but upon investigating the question afresh he obtained positive results. The following case is especially noteworthy: He excised a chancre in 1884, twenty-four days after the coitus in which infection had occurred. Subsequently there was slight cicatrization, with no induration, no swelling of the glands, and later no symptoms of syphilis. The very careful observation of this case extends to the year 1888. On the other hand, Neumann, Ricord, and Von Sigmond do not favor the method, and Ricord declares that the destruction of the primary sore is absolutely useless. Unna and Auspitz, however, have revived the treatment. Kreis thinks that at present we must conclude that excision of the chancre cannot abort syphilis. Nevertheless, he regards the operation as not only justified, but indicated for certain cases—if only to give a positive answer to the question and to adduce proof that the chancre is to be regarded as the local action of the infection and not as the expression of the general disease. The indications for the operation are: (1) absolute certainty of diagnosis; (2) operation as early as possible, before the lymphatic glands have been infected; (3) that the chancre should be typically formed and appear completely separated from the surrounding parts, so that it may be removed *in toto* without infecting the neighboring tissue.

A second question in dispute is as to the time when the general treatment of syphilis should begin—whether with the occurrence of the primary sore, the so-called preventive treatment, or with the occurrence of the secondary symptoms. Fournier, Mauriac, Jullien, Schwimmer, and others hope, by early mercurial treatment of the patient, to prevent secondary symptoms; or, if these should set in, to make the course milder. Doutrelepont, Köbner, Kaposi, Unna, and Neisser, on the other hand, take the position that the primary treatment generally fails to defer the timely appearance of the secondary symptoms, and that the latter often occur more obstinately and severely. Kreis agrees with Neumann in opposing early treatment. He says he has seen after it extremely obstinate affections of the mucous membranes of the mouth, and the occurrence of premature iritis, skin affections being absent. He thinks early treatment appropriate only for large chancres difficult to heal.

A third question of great importance is as to the most appropriate form and combination of mercury in the treatment of syphilis. Kreis concludes that mercurial ointment gives the greatest therapeutic effect with the least detriment. It may be employed as in the usual inunction "cure," or in the form of a soap containing metallic mercury, or in the form of a mull, as recommended by Unna. They are all only different methods of applying mercurial ointment, and are nearly uniform in their activity. The use of the *ung. cinerei* represents the best, most active and most permanent "cure."

How long should the mercurial treatment continue? Fournier especially has called attention to the fact that those cases which were not sufficiently treated, or which were treated for too short a time, were often followed by severe tertiary manifestations. He therefore thinks that the treatment of syphilis should be continued for at least three or four years; recently he has made the time still longer. Lang, Diday, Caspary, and Köbner combat the long-continued mercurial treatment, and maintain that such treatment leads to serious injury to the organism, both to the digestive organs and the central nervous system. Neisser is in favor of long-continued, but intermittent, treatment. Kreis regrets that we lack statistics of cases extending over a long time; these would give us the necessary light by which to decide the question. All cases, however, should not be treated according to the same plan.

He concludes that, though the present treatment of syphilis does not enable us to cure every syphilitic permanently, yet we can by proper treatment always get rid of the symptoms again. We must in most cases consider syphilis an absolutely curable disease, and always a relatively curable one.—*Correspondenzblatt für Schweizer Aerzte*, No. 5, 1891.

"I WISH that we could begin again, start from our present position and long experience to take a deeper insight into human suffering. It would be a compilation of records of what we had journeyed through with our own fellow-creatures, and with a view of seeing how the suffering and misery are to be got rid of. There should be a rational therapeutics derivable from pathological teaching; but it cannot be gained by merely looking at lower agencies, which are disintegrating and crumbling to pieces, and which cannot develop into greater and higher usefulness. But see, rather, how we come to miss the greater constructive powers, and in missing them become conscious of failure and disappointment. In other words, a more practical pathological teaching is called for."—DR. H. G. SUTTON.

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THE NOMENCLATURE OF PTOMAÏNES, LEUCOMAÏNES, ETC.

IF one attempt clearly and sharply to define the terms ptomaïne, leucomaïne, animal alkaloid, toxine and toxalbumin, he will find that not one of them can be defined so that it is accurately delimited from the others, either as to origin or as to qualities. The best authors are not at all agreed as to the definitions that should be used; all complain of the defects and vagueness of any classification or definition. Take the word about which there is the least doubt: a ptomaïne is said to be a putrefactive alkaloid, a product of katabolic tissue-metamorphosis under the influence of bacterial agency. From its root and derivation a ptomaïne should be found only in the dead animal body, πτωμα meaning a cadaver; but ptomaïnes may be formed in the living as well as in the dead body. The name is, therefore, the outcome of a mere accident on the part of the first discoverer, and with scientific research has become a misnomer and misleading. SELMI should have designated these substances from an essential, not from an accidental factor of their origin. The chemical changes that take place in the cavities of the body may be quite as removed from the action of the living tissues of the body as if they occurred in a dead body miles away. In attempting to clear up the indefiniteness surrounding this subject BRIEGER has greatly increased it. He has proposed still to call the non-toxic basic products ptomaïnes, but designates as toxines those that are poisonous. Again an accidental instead of an essential etiological or qualitative fact is made the basis for a name. Some of the ptomaïnes are innocuous, some only slightly toxic, some intensely so, some harmless in single or moderate doses, some cumulatively toxic, or poisonous in large doses. The term toxine, if employed at all, should comprehend any toxic alkaloid whatever. As used by BRIEGER it is inaccurate. In the same way the word leucomaïne is incorrectly applied to substances analogous to ptomaïnes, but formed in the living instead of in the dead body; but if ptomaïnes are basic alkaloidal substances that may be formed in the living body, and leucomaïnes are precisely similar substances also formed in the living body, the definitions evidently overlap. A ptomaïne may be a leucomaïne, or *vice versa*. The confusion becomes greater when it is added that leucomaïnes may be products either of fermentative (or microörganismal) action or of physiological katabolism. The term animal alkaloid is sometimes used instead of ptomaïne, but is defective, as VAUGHAN and NOVY have pointed out —in that these substances, or some of them, may be produced in decomposing vegetable matter.

As if the confusion were not yet great enough, BRIEGER and FRAENKEL have proposed the term toxalbumin to designate those toxic proteid substances formed within the living body as a result either of fermentative changes or of normal katabolism. Now, "while it is true that some belong to the albumins, others are more truly albumoses; others are most closely related to the peptones; and still others differ in some important respects from all these."[1] Again an accident furnishes a name that renders all distinctions impossible, whilst the name itself in several respects implies positively incorrect descriptions.

It thus becomes apparent that further use of these terms, especially those latest invented, must be given up. The indefiniteness is already so great that but few specialists, even, have a clear grasp of the distinctions attempted to be conveyed by the over-

[1] From advance sheets of the new edition of the work of Vaughan and Novy, kindly furnished by the authors.

lapping and misleading definitions, with their implications of false etiology, doubtful origin, and erroneous qualities and connotations. Our best authorities, DRS. VAUGHAN and NOVY,[1] have sought to obviate these misdefinitions and misunderstandings, by substituting for the criticised terms the term "bacterial proteids," to designate those proteid bodies formed by the fermentative action of germs, while those constituting an integral part of the cell are named "bacterial cellular proteids." In one sense this is a move in the right direction, but in another it seems much like piling Pelion upon Ossa. All the products of bacterial action in the economy are not proteids. Non-bacterial pathological katabolic products are left unnamed and unclassified. It would seem wiser to dispense entirely with the old nomenclature, and if possible start entirely anew.

not all anabolins are quite certainly physiological products of the constructive processes of life and health. The katabolins are to be divided into—first, the normal, or those that are the natural and necessary products of healthy tissue-katabolism; and, second, the pathological, or those resulting from microbic influences, or abnormal processes, whether in living or dead bodies. The last group, of course, comprises all those heretofore classed as ptomaïnes, leucomaïnes, toxines, and toxalbumins, and is to be subdivided into two chief classes—the autogenetic, or those the products of non-infectious or non-bacterial morbid processes, and the heterogenetic, or germ-produced. The accident of toxicity may be expressed by the adjective toxic, or by the compound toxikatabolin. The accident of origin in living or dead tissues is readily indicated by adjectives or easily-formed compounds.

- **METABOLINS.** Products of metabolism from the inception of ingesta to their decomposition end-products.
  - **ANABOLINS.** Products of anabolic activity; substances of progressively increasing complexity.
    - NORMAL.—The natural products of healthy, retrograde tissue-metamorphosis.
  - **KATABOLINS.** Products of katabolic processes; substances of decreasing complexity. *Toxic or Non-toxic. Alkaloidal or Basic. Microbic. Albuminoid. Nitrogenized. etc. etc.*
    - AUTOMICROBIC.—The excretory products of the bacterium. — Varying with food and media, toxic or non-toxic, pathologic or non-pathologic, etc. etc.
    - PATHOLOGIC.
      - AUTOGENETIC. — Produced by non-infectious or non-microbic morbid processes.
      - HETEROGENETIC.
        - *a.* Substances produced by the action of the parasite upon the tissues or media, or by the reactions of the tissues or media to the microörganismal irritant (*ptomaïnes, toxines, etc.*)
        - *b.* Substances produced by the reactions of the tissues or media to automicrobic katabolins, or by mixtures of Class *a* and automicrobic katabolins.

The most essential, fundamental, and characteristic fact about all these infinitely various substances is that they are metabolic products, whether physiological or pathological, self-produced, or germ-produced, toxic or not, etc. Why not, therefore, designate them by the generic term Metabolins—subdivisible, of course, into anabolins, or those metabolins with increasing complexity of construction, and katabolins, or the metabolins of the descending series. These terms are neutral and colorless so far as concerns possible false implications, and while they are comprehensive, if used with qualifying terms they seem sufficiently designatory.[1] Most if

This scheme apparently leaves out of consideration the products of microörganismal activity in artificial culture-media, and also the exclusively excretory products of the bacteria themselves, as distinct from the consequences of their action upon the living tissues, or the reactions of the living tissues to the bacterial irritation. In answer it may be said that microörganismal products arising in artificial culture-media differ in no essential property from those produced in the culture-media of ante-mortem or post-mortem animal tissues, and they may very properly be included among the microbic or heterogenetic katabolins. They might be called artificial katabolins. As to the exclusively excretory products of microörganisms, they are also truly katabolins, and may, if desired, be called

[1] Loc. cit.

[2] The terms Metastate, Anastate, and Katastate were devised for and have been used to represent purely physiological products.

microbic-excretory or automicrobic katabolins. It goes without saying that about these questions a world of mystery awaits clearing up, and all that can be done is to adopt a nomenclature that does not stifle investigation and confuse the mind.

A schematic view of the nomenclature here recommended is given on the opposite page.

THE SUMMER CARE OF INFANTS.

"THE melancholy days have come," the saddest in the calendar of infancy, when the sterilizer, the intestinal antiseptic, and the patented and infallible food hold sway. With that constant tendency so long observed in medicine, the pendulum is slowly swinging from the extreme of antibacterial prophylaxis to a reconciliation between old usages and new theories. The first to make sterilization popular, SOXHLET, in recent numbers of the *Münchener medicinische Wochenschrift*, announces modifications in sterilization, doing away with stoppers, substituting for them thin sheets of rubber to be tied over the bottles; the expansion of the rubber permits the exit of gas set free during heating. He does not find sterilized milk the universal food so long sought, but in common with LEEDS and others he has observed that in some cases fat is so emulsified by sterilization that the milk becomes less digestible. All observers look to reforms in dairy hygiene and milk-producing for the next substantial advance in securing a suitable food for infants. In this connection the suggestion of BRUSH, to separate as far as possible the production of milk from the breeding of cattle, is a wise one. Under circumstances favorable for the growth of noxious bacteria, prolonged sterilization and intestinal antisepsis are of proved value, and the field for future study in this, as in so many other departments of medicine, lies in separating noxious from innocuous bacteria, and in a better knowledge of the means for destroying the one and utilizing the other. In brief, in hospital and city practice, during the heated term, sterilized milk, intestinal irrigation, and antisepsis, with stimulation and supplementary feeding, will prolong the lives of foundling and artificially-fed infants until they can be taken into the country or until cooler weather returns. For infants born of healthy parents amid good surroundings, scrupulous cleanliness and regular feeding, under the guidance of that rare scientific faculty, common sense, with an outdoor life, are in the majority of cases sufficient.

Sterilized milk, although usually unnecessary, may at times agree when nothing else will. The golden maxim remains, in spite of bacteria and ptomaines, that that which nourishes the human being is proper food, that each individual is a law to himself, and that only patient observation can read that law.

THE RECENT EXECUTIONS BY ELECTRICITY.

THE officers of the law charged with the recent execution of the four criminals at Sing Sing, N. Y., have done their unpleasant work with most commendable skill and judgment. It was exceptionally necessary in the present case that there should be no bungling of any sort. Everyone felt that mistakes might naturally occur in the first trial of the novel method of execution, but that in these later cases the decisive test was to be made. It now appears that dispassionate minds are generally in agreement that, granted the frightful necessity of capital punishment, a great stride out of barbarism and brutality has been made with the adoption of the new method of execution by electricity. There seems to be nothing to add to the carefully weighed judgment of DR. A. D. ROCKWELL, of New York, who was present at the execution and post-mortem examinations. In a letter written THE NEWS July 8th, DR. ROCKWELL says: "The executions on Tuesday demonstrated to the satisfaction of myself, as well, I think, as of all others present, that no method for the disposition of criminals condemned to death could better meet the requirements of decency and efficiency, and that it ought to supplant everywhere the barbarous process of hanging. Through electricity death comes instantly, painlessly, and unattended by mutilation, convulsions, or any distressing outward manifestations of pain. Post-mortems after death by electricity invariably reveal the fact that no gross lesion or rupture of tissue has taken place. The nerve-centres and heart are instantly paralyzed, and life ceases."

"TWENTY years ago we were steering well and steadily toward great principles on the preventive as well as the curative side of medicine; then there crept in the wild enthusiasm for bacteriological research—research good enough in its way as a piece of natural history and as disclosing some curious vital phenomena developed under morbid states of the organic structures and the blood, but a positive insanity when accepted as the one absorbing pursuit, restoring the humoral pathology, ignoring nervous function, leading to Babel with its utter confusion of tongues, and separating for a time our modern art of cure from the accumulated treasures of knowledge, wisdom and light of over two thousand years."—DR. B. W. RICHARDSON.

REVIEWS.

PHILADELPHIA HOSPITAL REPORTS. Volume I., 1890. Edited by CHARLES K. MILLS, M.D., Member of the Neurological Staff. Large 8vo., pp. xii., 353. Philadelphia: Detre & Blackburn.

BOTH scientific and clinical medicine are to be congratulated upon the step taken by the Medical Board of the Philadelphia Hospital in so wisely imitating the example of the large general and special hospitals of Great Britain and Europe, by bringing before the medical profession at large the representative work of its members in a collective form, instead of allowing the great wealth of its recorded material to be scattered throughout medical journals in such a desultory way that no adequate idea of the real amount of work done in such an institution can be obtained by anyone not actually acquainted with the staff.

This, the first volume, which has been under the judicious care and watchful eye of Dr. Mills, contains a most interesting account of "The Medical History of the Philadelphia Almshouse," by D. Hayes Agnew, M.D., followed by two facetious and happy addresses by Alfred Stillé, M.D., in which the historic Blockley cockroach is mentioned. After a contribution upon numerous historical memoranda by the editor, come twenty-five important articles on medical subjects, founded on work done in the hospital wards by various members of the staff. These embrace the results of anatomical studies, experimental research and clinical diagnosis, with the effects of both surgical and medical therapy in nearly every department of medicine. A few brief accounts of the most important epidemics occurring since 1862, by Dr. R. G. Curtin, practically closes the book.

Of course, in the initial volume of such a series of reports, much that is descriptive and reminiscent has been inserted; this should always be when there is so much to interest and so much to show the progress of practical medicine in a large charitable institution like the Philadelphia Hospital. It is to be sincerely hoped that enough fresh clinical material and sufficient additional historical data may soon be obtained to permit of the early appearance of a second report.

A TREATISE ON THE DISEASES OF THE NERVOUS SYSTEM. By WILLIAM A. HAMMOND, M.D., with the collaboration of GRÆME M. HAMMOND, M.D. Illustrated. Ninth edition. New York: D. Appleton & Co., 1891.

THERE are few books, even upon those subjects which are constantly in the ordinary physician's mind, which succeed as has that of Dr. Hammond; and when we recollect that when the first edition of this work appeared, neurology in America was in its very infancy, the rapid exhaustion of its editions is the more remarkable. In the ninth edition the writer's son has done much toward keeping the work abreast of the times, and, with more confidence than ever, it can now be regarded as one of the best and most satisfactory works on nervous diseases, either for the practitioner or for the advanced student. The book is beautified and its usefulness increased by a larger number of illustrations than heretofore—among the best from a medical point of view being those representing syringo-myelia, which have been taken from the studies of Van Giesen. In the article on tetanus the microbic nature of the disease is dwelt upon at very proper length, but the fact that tetanus is sufficiently contagious to require isolation is not stated, while the possible influence of certain soils which are capable of causing the disease, by reason of the germs which they contain, is also ignored. In regard to hydrophobia, so called, Dr. Hammond thoroughly believes in its existence, and also asserts that the bite of a healthy animal, such as the dog, may produce the disease in man. In regard to Pasteur's treatment, the author says that if he were bitten he would prefer to rely upon the cautery rather than upon inoculation.

A COMPEND OF EQUINE ANATOMY AND PHYSIOLOGY. By WILLIAM R. BALLOU, M.D., Professor of Equine Anatomy and formerly Lecturer on Physiology, New York College of Veterinary Surgeons; Instructor in Genito-urinary Surgery, New York Polyclinic; Surgeon, Bellevue Dispensary; late House-Surgeon, Bellevue Hospital, New York. With 29 graphic illustrations, selected from Chauveau's *Comparative Anatomy*. Philadelphia: P. Blakiston, Son & Co., 1890.

THIS anatomical and physiological *résumé* is admirably adapted to the purpose for which it is designed. Containing all the essential points of the anatomy of the horse, it may be consulted in the dissecting-room by those preparing for examination, and for hasty reference afterward. As its author explains, the book is mainly a compilation, and we add, it is well arranged and the work done with great thoroughness. The nomenclature, where practicable, is that adopted by the general medical profession. The only thing omitted is a mention of the principal anatomical differences between different species of domestic animals, a brief enumeration of which should perhaps form a part of a work of this kind. Since it is especially intended for veterinary students, it would be well to incorporate these in a later edition.

PRACTICAL NOTES ON URINARY ANALYSIS. By W. B. CANFIELD, M.D., Lecturer on Clinical Medicine, University of Maryland. [Physician's Leisure Library.] Detroit, Mich.: George S. Davis, 1891.

IN this little monograph the author has collected and well arranged all that is known concerning urine analysis up to date. The field has been so thoroughly and carefully covered that the only claim for this work can be, that the latest tests, such as the trichloracetic acid test for albumin, and the phenylhydrazin and indigo-carmine tests for sugar, are fully elucidated. The author describes the normal as well as abnormal constituents of urine, and also the various bodies found in the sediment.

The urine of fever, of acute and chronic nephritis, of contracted and amyloid kidney, of diabetes, uræmia, cystitis, and calculus, is carefully considered. One great merit in the book is its condensed form, the practitioner being able to find at a glance, without wading through a lot of more or less useless matter, what he may desire. The plates, especially those depicting sediments and the various kinds of casts, are very well drawn.

As a ready-reference book for instantanous use, this little volume will be of much service.

DIGESTION AND DIET. By SIR WILLIAM ROBERTS, M.D., F.R.S. Pp. 261. Philadelphia: Lea Brothers & Co., 1891.

IT is only when the physician is brought face to face with a case of disordered digestion that he finds himself wishing either that his memory concerning physiological functions were better, or that in college days his teacher had more clearly shown the practical distinctions between normal and abnormal preparation of food for assimilation. To all those who feel puzzled when dealing with such cases we recommend this book. It contains so much valuable information, and so succinctly sums up the most recent views in regard to digestion and indigestion, that it affords a reliable guide of a convenient and readable size. In some respects the book resembles that of Brunton upon a similar subject which contained papers read or addresses made before learned medical societies on those subjects, and which some years ago was so deservedly popular.

THE CARE OF THE EYES IN HEALTH AND DISEASE. By D. N. SKINNER, M.D. Boston: J. G. Cupples & Co., 1891.

THIS little book discusses in a popular manner the anatomy and physiology of the eye, the defects of vision and their treatment by spectacles, some of the common diseases of the eye, suggestions in regard to the care of the eye, and the result of school life upon the visual organ. There is nothing very original in the book, but it certainly is a conscientious statement of the subjects which have been mentioned, and might with profit be read by the general practitioner, and be placed in the hands of those who have children under their care, especially children in their early school years. For the most part the advice given is sound, and stated in such a manner that anyone, be he layman or doctor, may read it with profit.

"JOE BROWN," DOCTOR, ON ALCOHOLISM: ITS CAUSE AND CURE. New York: E. Scott, 1891.

THIS anonymous publication of one hundred and five pages presents a vivid picture of the horrors of alcoholism. The alcohol habit is considered a disease. The author, in his zeal, errs in denying alcohol any medicinal properties. The remedy recommended for the habit—abstinence and forced nutrition—is rational and practical. The little work is clearly a "temperance" document, and its force is somewhat weakened by the evident bias that pervades it.

MEDICAL SYMBOLISM IN CONNECTION WITH HISTORICAL STUDIES IN THE ARTS OF HEALING AND HYGIENE. By THOMAS S. SOZINSKY, M.D., Ph.D., etc. Illustrated. Philadelphia and London: F. A. Davis, 1891.

THIS scholarly little work is the enlargement of a journalistic essay previously published. It has received the praise of Drs. Frances Emily White, Weir Mitchell and Henry M. Smith, and well deserves it. The history of medicine receives too little attention from medical students, and the attempt here made to illuminate the mythological aspects and origins of the science deserves commendation.

LE JOURNAL DE LA SOCIÉTÉ MÉDICO-CHIRURGICALE CANADIENNE-FRANÇAISE DE LA NOUVELLE-ANGLETERRE is the name of a new monthly, published entirely in the French language, at Lowell, Mass., the first number of which appeared in January, 1891. Dr. E. Sirois is the secretary of the editorial staff. The fact is of interest as showing how the native New Englander is being crowded upon by the French-Canadian.

CORRESPONDENCE.

LETTER FROM NEW YORK.

Popularization of the Subjects Discussed at the New York Academy of Medicine—Proposal of an "Air Garden" over a Reservoir—Public Baths—Union of the College of Physicians and Surgeons with Columbia College—The Post-Graduate Medical School—The House of Rest for Consumptives at Tremont—The Eastern Dispensary—The Abuse of Medical Charity.

IN my last letter I referred to some of the interesting discussions that had taken place in the various societies of this city, and particularly to those bearing upon the subject of the new treatment of tuberculosis. The present attitude of the medical profession here upon this now well-worn theme was accurately stated in a recent report that you published, of a formal discussion held at the New York Academy of Medicine. This body of medical men has shown much energy in the work of the past winter, and in no section perhaps has this been so apparent as in that on "Public Health." The change is the more gratifying because hitherto this very important department has received but little attention; in fact, the attendance at the meetings was so small that one of the members told me that an effort would be made to bring the subjects for discussion to the notice of non-medical persons, and that, at any rate, the section was determined that its apparent inactivity should no longer be a reproach to the Academy of Medicine. This purpose has been steadfastly kept in view, and with such success that on one occasion the usual meeting-room was not nearly large enough to accommodate the audience. At one of these meetings they took up the matter of the proposed "air garden" over the Forty-second Street reservoir, which a very enterprising daily newspaper was endeavoring to make its readers believe would fill a "long-felt want." Strange as it may seem, this journal, which so constantly boasts of being "the champion of the people," nearly succeeded in perpetrating this outrage in the name of humanity, and had actually secured the passage of the bill in one branch of the Legislature. The prompt action of the Academy of Medicine resulted in the defeat of the measure, and I only mention the subject to allude to one or two points of general interest that were brought out in the discussion.

In addition to the almost self-evident fact that a pool of water in the centre of a large city, when deprived of the purifying influences of sunlight and air, must of necessity prove a source of disease, attention was

directed to the practical engineering difficulties in the way of preventing the pollution of the water from a beer garden above it. It was alleged by the promoters of this scheme that the water of this reservoir would be used almost exclusively for fires, but supposing that its use was so restricted, the infection of the general water supply would not be prevented, because the same pipes were used for drinking purposes and for fires. As an instance of the great difficulty in detecting the source of pollution in the water supply, one of the speakers referred to an experience at a certain asylum, where a careful examination of a distant drain, and the usual chemical analysis of the well-water failed to show any contamination, and yet shortly after some chloride of lithium was placed in the asylum sink, the presence of this salt could be detected in the well-water by spectroscopic examination; and on ceasing to use this water, an epidemic of typhoid fever that was at that time raging in the institution was speedily checked.

The matter of public baths has been brought to the notice of the Academy and of the public generally by Dr. S. Baruch. Although some people may consider this gentleman a good deal of an enthusiast on hydropathy, few will deny the crying need in our city of better bathing accommodations. To hear Dr. Baruch describe the delights of the "rain bath" is almost enough, I should think, to persuade even the poor Italians to run the risk of a bath, and certainly, in all soberness, it must be said that the "rain bath," which is the form advocated for public use, has much to recommend it, on the score of both economy and efficiency. The matter has been taken up by the Society for Improving the Condition of the Poor, and it will not be long before these baths will be put to a practical every-day test. The construction of one has already been begun, and it is expected that it will accommodate 500 persons daily.

The Faculty and Alumni and in fact all connected with the old College of Physicians and Surgeons are just now in a state of jubilation over the union of the college with Columbia College. The Faculty is glad, because they have found the care of the splendid gifts of the Vanderbilts almost beyond their means; the instructors are happy, because they see in it some chance of receiving remuneration for their services in the clinic, while the graduates are pleased, as they see in it a prosperous future for the college, and the assured independence that will do much to raise the standard of medical education.

The Faculty of the Post-Graduate Medical School recently held its annual dinner, and the occasion was made doubly enjoyable by the announcement that the sum of $5000 had just been given to assist in purchasing the two buildings adjacent to the school, so that better accommodation might be secured for the constantly increasing classes.

It is with pleasure that I learn that the House of Rest for Consumptives at Tremont has passed into the hands of the trustees of St. Luke's Hospital, for this hospital is well known as having set an example in the matter of caring for consumptives that it would be well if our other metropolitan hospitals would imitate. The understanding is that the hospital will maintain forty beds for the care of consumptive patients. It certainly seems strange that in this city, where new hospitals are constantly springing into existence—for some of which it must be confessed there is but little real demand—that the sore need of adequate provision for consumptives and incurable cases, as well as for convalescent patients that are crowded out of our general hospitals before they are able to go to work, should be overlooked. Large sums of money are divided up among many hospitals, all more or less worthy, while the incurable, and in medical parlance, the "uninteresting" cases receive but little aid. It would be well indeed if our hospitals would pay more attention to the humane aspect of their work and less to the mortality rate and the "interesting" character of the cases they admit.

The large dispensary down town on the crowded East-side, at the corner of Essex and Grand Streets, so long known as the Eastern Dispensary, has been removed to its handsome new home on the corner of Broome and Essex Streets, and its name has been changed to the Good Samaritan Dispensary. It was quite recently opened with appropriate ceremonies, and those who were present on that occasion and inspected the new building were impressed with its elaborate appointments. On the first floor, as the patients enter, they are received by a physician and classified, and those found to have contagious diseases are sent into small isolating rooms and the Board of Health notified. They are prevented from prematurely taking their departure, pending the arrival of the health inspector, by the fact that the doors to these rooms have the knobs only on the outside. An elevator is provided for the use of the patients, who are given different colored cards that show the respective departments to which they are to be distributed. As the cases are classified, brief histories are taken down by a stenographer and typewriter operator employed for that special purpose. It is doubtful whether the wretched and densely ignorant people who throng this dispensary appreciate their privileges, but certain it is that the luxuries now offered by some of our modern dispensaries, such as the Vanderbilt Clinic, are so well appreciated that people in *comfortable* circumstances come from far and near to them, and instead of doing this in secret, they now take pleasure in telling all their friends about how nicely they were treated by the various "professors," and usually wind up by recommending their friends to go and do likewise. In connection with this subject, I cannot refrain from referring to the last report of the Demilt Dispensary, which contains some very wholesome reading, and deals with the subject of the abuse of medical charity and with the character of the medical services rendered at the dispensaries, in a spirit of candor and fairness that is in sharp contrast with the tone of the reports from other dispensaries. After comparing the increase in the number of patients during the past year with the increase in the population, it says: "It is difficult to escape the conclusion that more and more people are using dispensaries. To relieve actual distress we should be zealous, but to do it with the minimum amount of demoralization to the applicants should ever be our aim. Getting something for nothing is demoralizing, whether it be food, clothing, or drugs. A falling-off in these yearly statistics might speak well for the health of the people, or for their independence, or self-respect; it would not necessarily imply poor dispensary management. Real dispensary progress is shown by increased

efficiency, improved apparatus, and greater skill and promptness, not necessarily by enlarged statistics." If other dispensary managers would act upon the fair principles here laid down, the work of the physicians would be much more carefully and skilfully performed, and both the physicians and the patients would be benefited thereby.

PATENT MEDICINES.

To the Editor of THE MEDICAL NEWS,

SIR: I have read with interest Dr. Cowan's letter entitled "Patent Medicines, Quackery, etc." I would like to ask, How will the patent medicine craze ever be stamped out of existence if reputable physicians continue to prescribe the preparations? It is only a few years ago that a physician in this State compounded remedies such as are sold everywhere and published the formulæ. He was expelled from the County Society to which he belonged. To-day the profession is importuned by firms selling such compounds as antikamnia. These firms refuse to divulge the formulæ, yet physicians prescribe this and many similar preparations. I say, *Down with secret formulæ in the profession!*

Truly yours, GEO. F. REIPER, M.D.

LA FAYETTE, IND., JULY 7, 1891.

NEWS ITEMS.

Hebra.—On Sunday, June 14th, a bust of the great dermatologist, Ferdinand v. Hebra, was unveiled at Vienna. An address was delivered by Professor Kaposi.

Ottokar Chiara has been made Professor Extraordinary of Laryngoscopy and Rhinoscopy at the University of Vienna.

Carl Wilhelm v. Naegeli.—On the 8th of May, Nägeli, the Professor of Botany at the University of Munich, celebrated the fiftieth anniversary of his attainment of the doctorate; on the 10th he was dead. Nägeli was a distinguished botanist and biologist. His body was cremated at Zurich.

A Memorial to Matthews Duncan.—It has been proposed by the friends and pupils of the late Matthews Duncan to perpetuate the memory of the great obstetrician by founding at St. Bartholomew's Hospital a Matthews Duncan medal or prize in obstetrics or gynecology, and the erection of a bust, to cost from $6000 to $7000.

Henry Gawen Sutton, M.B. Lond., F.R.C.P.—In the death of Dr. Sutton, at the premature age of fifty-five, not only the English, but the entire medical profession has suffered a profound loss. Dr. Sutton was especially well known for his work in the department of clinical pathology, and as clinician and pathologist occupied positions at Guy's and at the London Hospital.

Koranyi.—In commemoration of the twenty-fifth anniversary of his accession to the professorship, Korányi, of Budapest, made an endowment of 2000 gulden ($850), the interest of which for three years should constitute a prize to be awarded for the best medical work published during that time by one of the assistants at the University.

Handwriting in Prescriptions.—It is stated that the Austrian Minister of the Interior has recently issued an ordinance that the burgomasters of all communes must exercise strict supervision over the medical men practising within their jurisdiction in the matter of legibility of prescriptions. They are charged to see that every prescription is clearly and legibly written in all its parts, so that there may be no doubt as to the remedy, the dose, or the signature.

The Society of Hypnology will meet at Paris, July 20, under the presidency of Dr. Dumontpallier. Measures will be taken for the organization of a second Congress of Hypnotism, to be held in 1892. Among the subjects proposed for discussion are the following: The Relations of Hysteria to Hypnotism; Criminal Suggestions and Penal Responsibility; The Influence of Maternal Impressions on the Fœtus.

Medical Congress in Cuba.—A medical congress will be held in Cuba in 1892. The following subjects will be presented for discussion: Topography and Medical Statistics in Some One Locality in the Island of Cuba; Etiology, Prophylaxis and Treatment of Yellow Fever; Pathology of the Liver in Hot Climates; Is Malaria the Cause of the Malignity of Fevers in Havana? Scheme for the Improvement of the Sanitary Condition of Havana.

The American Public Health Association, constituted of representatives of the United States of America, the Dominion of Canada and the Republic of Mexico, will hold its nineteenth annual meeting at Kansas City, Missouri, October 20, 21, 22, 23, 1891. The following subjects will be considered: 1. Sanitary Construction in House Architecture; (*a*) Heating; (*b*) Lighting; (*c*) Drainage; (*d*) Ventilation. 2. Railroad Sanitation. 3. Meat-supplies. 4. Milk-supplies of Cities. 5. Arsenical Papers and Fabrics. 6. Isolation-hospitals for Infectious Diseases in Cities. 7. Papers upon any of the subjects upon which special committees have been appointed. 8. Papers on miscellaneous sanitary and hygienic subjects.

The Koch Institute.—The clinical section of the new institute for infectious diseases at Berlin is about completed. The buildings comprise seven pavilions, with accomdations for 108 patients, and two for the medical officers and attendants. There is also a small lecture-room, with seats for fifty. The internal arrangements of the scientific section are already so far advanced that it will be ready for use at no distant date. Dr. Richard Pfeiffer, formerly Professor Koch's first assistant, will have charge of the scientific section, and it is probable that Professor Ludwig Brieger will be appointed head of the clinical department. Professor Koch himself will receive a salary of 20,000 marks ($5000) and Drs. Pfeiffer and Brieger 6000 marks ($1500) each.

Syphilis Legislation.—At the last session of the Massachusetts Legislature the following Act was passed and subsequently approved by the governor:

"SECTION 1. Any person who is confined in, or is an inmate of, any State penal or charitable institution, a common jail, house of correction or municipal or town

almshouse, who shall have the disease known as syphilis, shall at once be placed under proper medical treatment for the cure of such disease, and when in the opinion of the attending physician it is necessary for the proper treatment thereof, or that such disease is contagious, so as to be dangerous to the health and safety of the other prisoners or inmates in such institution, the persons under treatment shall be isolated from such other prisoners or inmates until the contagious stage of such disease has passed, or until the time when in the opinion of the attending physician such isolation is unnecessary.

"SECT. 2. When at the expiration of the sentence of any person who is confined in, or is an inmate of, any of the institutions named in Section 1 of this Act, such person shall then have the disease known as syphilis in its contagious or infectious symptoms, or in the opinion of the attending physician of such institution, or of such physician as the authorities thereof may consult, would cause the discharge of such person to be dangerous to public health and safety, such person shall be placed under proper medical treatment, and kept and suitably cared for as provided in Section 1 of this Act, in the institution where he has been confined, until such time as in the opinion of the attending physician such contagious and infectious symptoms shall have disappeared, and the discharge of the patient shall not endanger the public health. The expense of his support not exceeding three dollars and fifty cents a week shall be paid by the city or town where he has a legal settlement, after notice to the overseers of the poor of such city or town, or, if he is a State pauper, after notice to the State Board of Lunacy and Charity, of the expiration of his sentence, and of his condition."—*Boston Medical and Surgical Journal*, July 2, 1891.

Prohibition Medical Congress.—A medical congress was held at Prohibition Park, Staten Island, July 15 and 16, 1891. Dr. N. S. Davis, of Chicago, presided and delivered an address. The following subjects were discussed: The Physiological Relation of Alcohol to Food, by Dr. William H. Porter, of New York; Dr. Elisha Cheny, of Boston; Dr. Leslie E. Keeley, of Dwight, Ill. Some of the Effects of Alcohol on the Brain, by Axel Gustafson, late of London, England; Dr. N. Roe Bradner, of Philadelphia. Drunkenness a Disease: its Remedy by Scientific Means, by Dr. T. D. Crothers, of New Haven. Can a Physician Practise Medicine without Alcohol? and if so, What Shall be the Substitute? by Dr. C. Gilbert Wheeler, of Chicago; Dr. F. O. Broady, of Chicago; Dr. James Wood, of New York. The Effect upon Longevity of the Moderate Use of Alcoholic Liquors, by Dr. M. L. Holbrook, of New York. Does the Habit of Moderate Drinking in a Patient Increase the Danger when Attacked by Disease? by Dr. L. M. Green, of Wilmington, Ohio. Climatic Influences as Related to Inebriety, by Dr. E. P. Thwing, of Brooklyn, N. Y. The Normal Expenditure, Resources and Maintenance of the Human Economy, Physiologically and Chemically Considered, by Dr. J. Hartmann, of New York. What are the Effects of Alcohol upon the Physical, Chemical and Vital Properties of the Animal Tissues and Fluids? by Dr. Henry Clay Paddock, of New York; Dr. W. F. Pechumen, of Detroit; Dr. Ephraim Cutter, of New York. In What Ways may a Physician Effectively Help to Stay the Ravages of Intemperance? by Dr. R. H. Thomas, of Baltimore; Dr. Henry A. Pooler, of New York; Dr. Fred. Wooster Owen, of Morristown, N. J.; Dr. John Blackmer, of Springfield, Mass. Ammonia vs. Alcohol in Pneumonia, by Dr. George D Dowkontt, of New York. Personal Observation of the Effects of Alcohol in Producing Crime Among Women, by Dr. Lucy M. Hall, of Brooklyn, N. Y. Is Alcohol a Poison? If so, Should it Ever be Taken into the System except under the Direction of a Medical Adviser? by Dr. William C. Wile, of Danbury, Conn.; Dr. Henry Carver, of New York. Does the Moderate Use of Fermented Liquors tend to Injure the Body and Brain? by Dr. Edward C. Mann, of New York; Dr. Henry S. Drayton, of New York. The Use and Abuse of Alcohol as a Medicine, by Dr. Henry C. Houghton, of New York; Dr. H. Bedell Crane, of Newark, N. J. The Woman Doctor: Her Place and Work, by Mrs. Isabella M. Rankine, of Brooklyn, N. Y.; Dr. Sarah H. Morris, of Buffalo, N. Y. The Responsibility of the Medical Profession in Prescribing Alcohol, and their Duty in the Matter of Reform, by Dr. Morris, of Texas. The Use of Alcohol: First as Medicine, Second as a Beverage, by Dr. N. S. Roberts, of New York. Do Alcoholic Beverages Aid Digestion, and Assist in the Assimilation of Food? by Dr. I. N. Quimby, of Jersey City, N. J. The Hereditary Effect of Alcoholism, by Dr. John Francis Burns, of Fort Hamilton, N. Y.; Dr. Henry G. Hanchett, of New York. The Relations of Alcohol and of Heat to the Nervous Centres, by Dr. T. S. Lambert, of New York. The National Temperance Hospital at Chicago; the Results Noted of the Exclusion of Alcohol in the Treatment of Diseases, by Dr. C. G. Davis, of Chicago. The Latest Investigations of the Effects of Alcohol on the Heart, by Dr. David Wark, of New York. What is the Best Medical Treatment for Alcoholism? by Dr. N. L. North, of Brooklyn, N. Y.; Dr. C. H. Shepard, of Brooklyn, N. Y. An illustrated address will also be delivered by Dr. C. Gilbert Wheeler, of Chicago.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JULY 7 TO JULY 13, 1891.

COCHRAN, JOHN J., *Assistant Surgeon.*—Leave of absence on surgeon's certificate of disability extended three months.

BANISTER, W. B., *Assistant Surgeon.*—Granted leave of absence for fourteen days.

IRWIN, BERNARD J. D., *Surgeon.*—Relieved from duty at St. Louis, Mo., and ordered to Chicago, Ill., for duty as Medical Director, Department of the Missouri.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING JULY 11, 1891.

BOYD, ROBERT, *Assistant Surgeon.*—Ordered to the U. S. Receiving-ship "Dale," Washington, D. C.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will upon publication be liberally paid for, or 250 reprints will be furnished instead of payment, provided that the request for reprints be noted by the author at the top of the manuscript. When necessary to elucidate the text, illustrations will be provided without cost to the author.

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